

HARDWARE AND METAL

AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, SEPTEMBER 17, 1904.

NO. 38

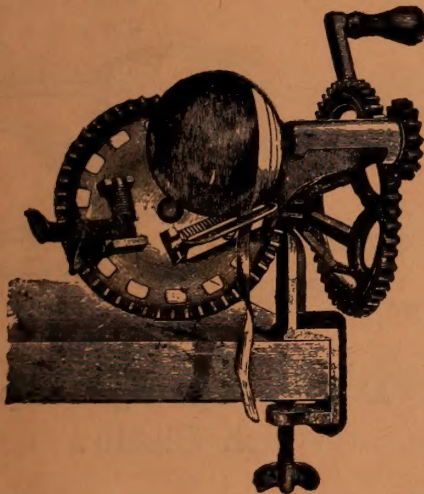
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"PEPPERCORN AND DIAMOND"
BRAND CUTLERY.
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BUTCHERS' STEELS

Canadian Agents: DORKEN BROS. & CO., Montreal

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That's all you need to know
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Order Through Your Jobber.

In "Apple pie order" is a good way to have everything.
We pride ourselves in keeping our stock this way. And
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we want every hardware dealer in Canada to remember
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2. That the Apple Parer we manufacture is not excelled by any other model. Ours is the famous **Hudson** pattern. It is made by us, is guaranteed by us, and is lower-priced than United States parers of comparable quality.

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NEWHOUSE
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TRAPS

GAME TRAPS

SPORTING GOODS

HUNTING COATS
CAPS
LEGGINGS
DUCK DECOYS
HUNTING KNIVES
etc.

No. 0—Adapted for Rat or Gopher.

No. 1— “ “ Muskrat.

No. 1½— “ “ Mink.

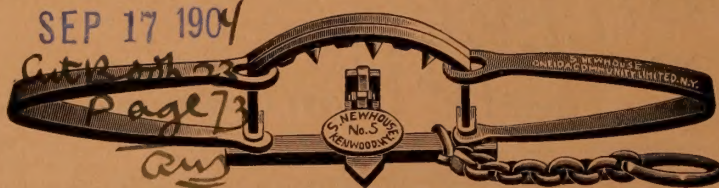
No. 2— “ “ Fox.

No. 3— “ “ Otter.

No. 4— “ “ Beaver.

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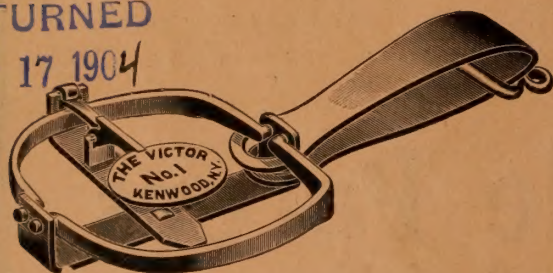
No. 5. BEAR TRAP.

SPORTING GOODS

FLASKS
GUN COVERS
HATCHETS
COMPASSES
DUCK CALLS
etc.

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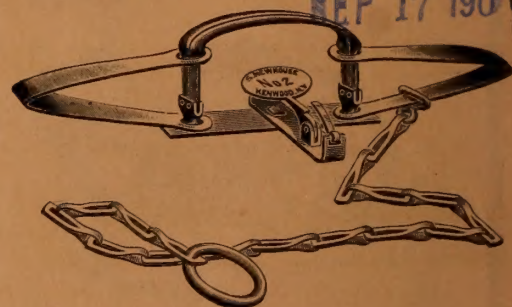
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IN
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PURE MANILA ROPE,
 Highest Quality Made,
BRITISH MANILA,
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 of every description.
 Lowest Prices and Highest Quality.

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We make a specialty of

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the best in the market.

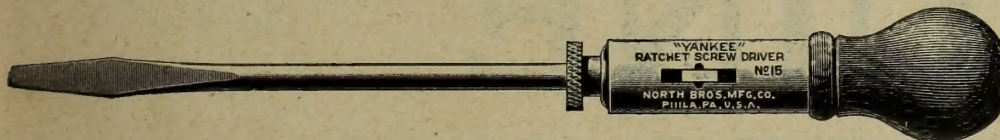
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Other Tools are very
 good Tools, but

“YANKEE TOOLS” ARE BETTER



No. 15. “Yankee” Ratchet Screw Driver, with Finger Turn on Blade.



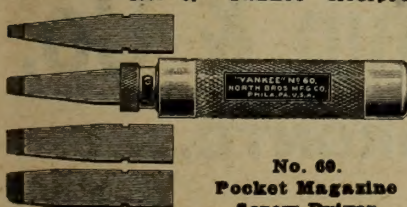
No. 30 “Yankee” Spiral-Ratchet Screw Driver, Right and Left Hand.



No. 41. “Yankee” Automatic Drill, Eight Drill Points in Handle.



No. 0. “Yankee” Reciprocating Drill for Iron, Steel, Brass, Wood, etc.



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Our “YANKEE” Tool Book
 tells all about them. Mailed
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49 Colborne St., TORONTO, ONT.

GENUINE RUSSIA IRON

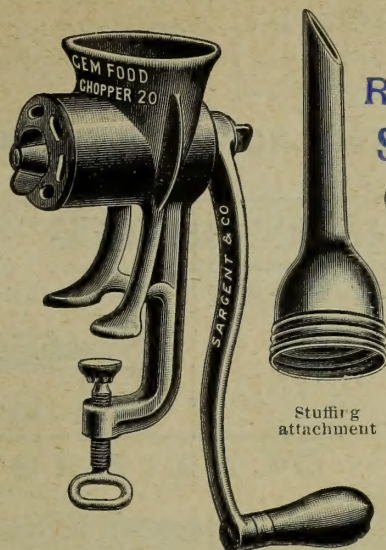
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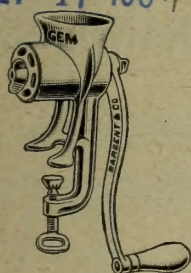
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Cut Book 23
Page 71
Aus

Stuffing attachment

Gem Food Choppers

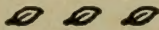
Made in Three sizes,—Nos. 20 22 24

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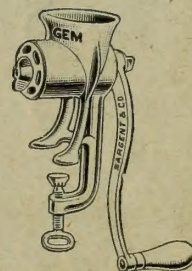


There is no other Food Chopper like the Gem—neither in looks, adjustment nor operation. Man, there is no end to the talking points of the Gem. But you will not need them. They are so well advertised that

*“They sell by name
Because of fame.”*

We import and distribute these to a large number of stores in Canada, and would like to put a few dozen into your store for a starter. We don't leave you there, either. We'll help you sell them by supplying you with advertising matter, and if you wish to push them in your local papers we will send you electro-types. What more could we do? 

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Bring your "ads"
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We furnish the kind of pictures that give to your "ads" a bright and smiling countenance. A cheerful face gains favor every time.

Estimates on all and every style of design cordially furnished.

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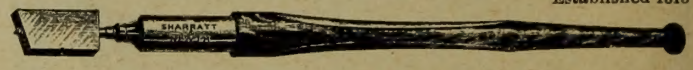
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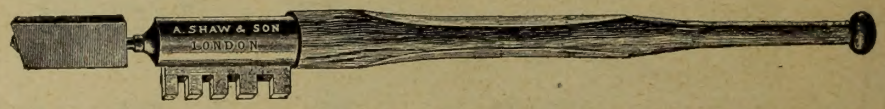
Established 1815

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The word Clauss stamped on an article means that it is good.



We warrant Clauss goods to be better than the best. Write for Catalogue and latest discounts.

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169 Spadina Ave., Toronto, Ont.

CELEBRATED HEINISCH SHEARS

Tailors' Shears,
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Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

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Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

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"Dominion" (or
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Oneida Community Cow Ties can be had of all the leading jobbers.
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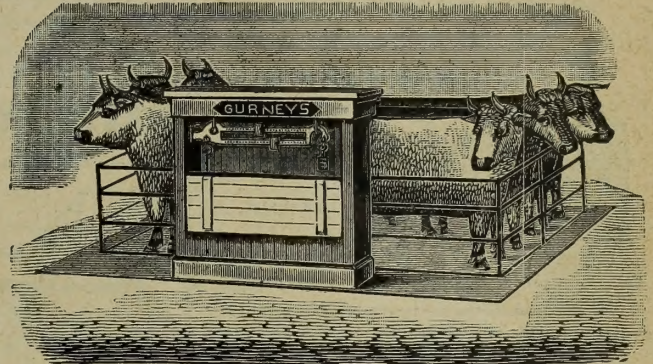
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We make scales of every description. Established 1856.
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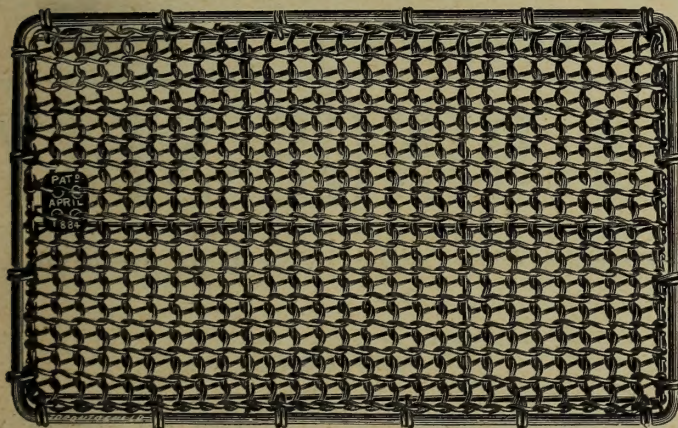
The Gurney Scale Co., Hamilton, Ont.

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The most durable, cleanest and perfect
sanitary Mat made.

Has been on the market for 20 years.

All sizes and shapes made to order.

For stock sizes see catalogue.

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STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.**

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for

TROLLEY - TELEGRAPH - TELEPHONE
and

TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.
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MONTREAL and TORONTO



"Pullman"
Lawn Sprinkler
IS YOUR
ORDER IN?
Send for Folder No. 14.
PULLMAN MFG. CO.
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ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**

Ask for our Catalogue and Quotations.



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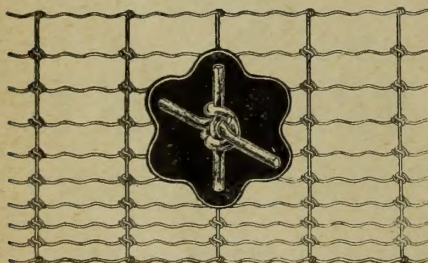
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For Manufacturers of
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All our work is guaranteed to be satisfactory.

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Is Strong and Durable, because Large Gauge (No. 9) Steel Galvanized Wire is used throughout. SEE OUR EXHIBIT AT PRINCIPAL FAIRS, or write for Catalog.

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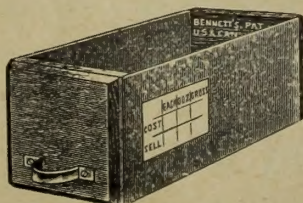
Merrick, Anderson & Co., Winnipeg, Man.
Sole agents for Man. and N.W.T.

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Bennett Manufacturing Co.

Bennett's Patent Shelf Box and Cabinets
for Hardware, Grocery, Seed and
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Owing to
the steady
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growth of
our business
new quar-
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needed.



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This design a guar-
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Heavy Red-Brown Wrapping
FOR EXPRESS PARCELS. STRONG, TOUGH AND STIFF.

SAMPLES AND PRICES
GLADLY SENT.

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DAVISON'S MINIATURE TOOLS.

A perfect working model wrench, exact size of cut.
Accurately proportioned and made exactly to scale.
Handsomely nickel-plated. Sells on sight.
\$2 00 per doz. Pearl Hand e, \$3 00 doz.



DAVISON MFG. CO., 112 Front St., Brooklyn, N.Y.



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RAT AND MOUSE TRAPS

STRONGEST TRAPS MADE. PRICES EXACTLY RIGHT.

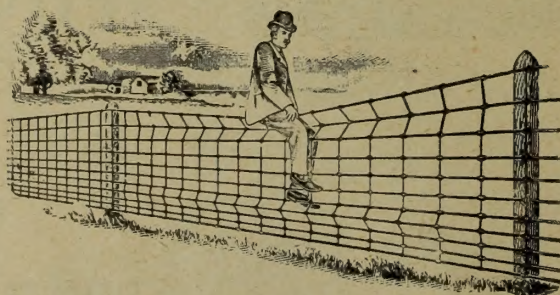
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SPECIAL DROP FORGED SPRINGS THE WALLACE BARNES CO., BRISTOL, CONN.

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Why handle Barb and Coiled Wire at no profit when
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Dillon Fencing



Got up specially
for the hardware
trade.

Easily put up
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Write for prices in car or small lots.

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OWEN SOUND WIRE FENCE CO., Limited
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Cordage

Of every description.

Net Mountings,

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Extra Long Lengths,

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Shingle Yarn.

Core Rope,

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Russian Packing,

Deepest Sea Lines,

Ancor Line,

Good Transmission Rope,

Engine Packing.

Clothes Lines,

Only Best Material Used.

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Twine.

Dangerous to use Inferior Cordage.

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To us and

Recieve

Exceptional

Attention.

Low-priced goods are not always
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TRUE BRAND



CUTLERY

POCKET CUTLERY, RAZORS, SCISSORS,

QUALITY GUARANTEED

BEST GOODS

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., Montreal

PRICE is a good thing,—but,
QUALITY is better.

Wilcox Door Hangers Combine Both.

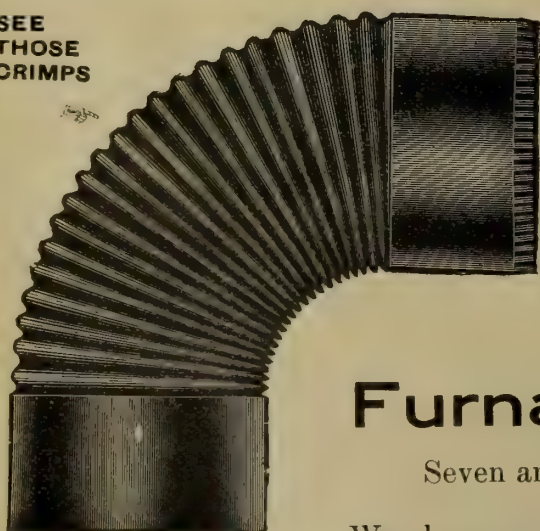
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Wilcox Mfg. Co. of Ontario, Limited

LONDON, ONT.

KEMP'S STANDARD ONE-PIECE STOVE PIPE ELBOWS

SEE
THOSE
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Perfectly Round, and true to size, Seam in Centre, or under side of Throat, thus making it the

**NEATEST and STRONGEST
STOVE PIPE ELBOW MANU-
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Supplied in THREE SIZES, and from Common or Polished Sheet Steel.

Furnace Elbows

Seven and Eight Inch, in Tin, Sheet Steel or Steel Galvanized.

We also carry in stock a full range of **Canada Plates**, which we can supply at LOWEST MARKET PRICES. We will be pleased to quote you.

KEMP MANUFACTURING CO., TORONTO, Canada

COMMERCIAL TRAVELING IN CANADA

A Canadian Traveler's Views.

THE following letter received from an eastern correspondent serves as additional proof that Canadian business men not only read *Hardware and Metal*, but consider it one of the best possible mediums for the discussion of matters of public interest:

Editor *Hardware and Metal*:

Permit me to express my appreciation of the reproduction in your valuable journal of the correspondence published in the *Birmingham Daily Post*, between "Correspondent" and Mr. P. B. Ball, the Commercial Agent for Canada in Birmingham, on "Commercial Traveling in Canada." If you will not consider it presumptuous on my part, I am of the opinion that the gentleman who signed himself "Correspondent" is one too many for Mr. Ball. I consider Mr. Ball's reply to his first letter sadly lacking in logic and judgment. It is not my intention to discuss the relative merits of the different letters, but I do consider that it is most essential to do justice to Canada in the eyes of the people of the Mother Country, particularly to the readers of the *Birmingham Daily Post*, that such subjects should be discussed and Canada's methods of doing business, her transportation facilities and customs regulations, be upheld by a more liberal and broad-minded critic than Mr. Ball. In my opinion the reply by "Correspondent," which you publish in your last issue, does not leave a single argument brought forward by Mr. Ball in reply to "Correspondent's" first letter unanswered. I presume that part of the duties of Mr. Ball, as Canadian Commercial Agent, is to foster and encourage a closer commercial relationship between the Mother Country and Canada. A commercial agent, however, who ridicules the experience of any commercial traveler who wishes to expound his views through the medium of the public press, and resorts to personalities, as Mr. Ball certainly did, is sadly lacking in judgment.

He evidently wished to hold up "Correspondent" as an ignoramus, but "Correspondent's" reply shows that this is far from being the case.

There is no doubt that English business men are, as a rule, far from conversant with the methods of doing business in Canada, with the requirements

of the Canadian market, and the class of goods wanted by the Canadian buyer. I presume as Canadian Commercial Agent it is part of Mr. Ball's duty to enlighten the English manufacturer and dealer on this subject; I do not believe it is his duty to hold up to ridicule in the eyes of the people a gentleman who went through the trying ordeal of a first trip through Canada, where conditions are so different from those of the Mother Country.

I believe that "Correspondent's" sole motive in writing to the press was to give a few friendly pointers to any manufacturer or traveler contemplating an initial trip to Canada, and if his views were not exactly in accord with those of Mr. Ball I believe Mr. Ball could have framed his reply in a more diplomatic and courteous manner.

There is no doubt that we travelers on the road, who meet some representatives from the Old Country on their first trip to Canada, see some amusing incidents, and are sometimes tempted to repeat them at his expense, but put the shoe on the other foot, and send over one of our most experienced Canadian travelers on a trip through Great Britain, he would appear equally odd. Let us remember that these English gentlemen who come out here carry home impressions, either favorable or otherwise, so let us boys on the road give them a helping hand, a kind word, and be more charitable to our brothers from over the sea. When they return they will have nothing but good to say of Canada and the Canadians, thus adding another link to bind the Empire closer together.

W. C. M.

Truro, N. S., Sept. 5, '04.

An English Traveler in Canada.

WE have received, through Messrs. Rosser, Jones & Co., of Wolverhampton, the following letter, sent to them by a commercial gentleman now traveling through Canada. It was written en route from Halifax to Montreal, and expresses the view of the tariff question as it appears to the author of the letter. He says:

"As a commercial traveler, who for fourteen years has traveled in England, but who is now traveling the States and Canada, I venture to put before your readers the very serious position England is sure to be in unless she im-

mediately embraces the only salvation for her trade, and that is adequate protection. Under that very necessary policy this part of the world is becoming more and more progressive and successful. Under it the manufacturers are without fear of outside competition building up vast businesses, and under it the wages earner commands a fair return for his labor. Contentment reigns everywhere. It is nonsense to say the American works harder than the Englishman, that he has more brains, that the circumstances are different. I find a great amount of sameness; the only difference I find is that it is ten times easier to make a living here than at home. The people are doing well, consequently they are better buyers. No man here, if he is worth his salt, will work for a bare living. If he is a skilled man he gets thorough protection for his labor by his union, and the manufacturer has to pay in a fair proportion to his profits. He is protected from outside competition, and can charge accordingly.

"I used to hear, to refute all this, that in America living was so expensive that it neutralized all this high wage benefit. I contend that this is wrong. To start with, most American workmen own their own homes. Such necessities of life as bread and meat are cheaper. Fuel is dearer, so is clothing, but not much. You can get a good working suit of clothes for £2. Anyhow, the great point is this: the American artisan is a far better dressed man, better fed, and more extravagant than his English confrere. His children are given, free, a better education; he is thought more of. The snobs have not as yet come here who look down on a man who works, but honor him for it, and consequently give him more respect for himself. I have visited the lower parts of such large cities as San Francisco, St. Louis, and Pittsburg, but in none, except New York, have I seen a tenth part of the dirt and poverty to be seen every day in similar cities in England. All this is due to a wise protection.

"To give an instance of what we lose by being free to foreigners: Last Sunday I met a Belgian manufacturer at the Windsor Hotel in Montreal, and he said how glad he was that Chamberlain's scheme did not look like going

through. He said: 'If it had, I have already secured land in England to erect our factories. My business is that of a manufacturer of cotton blankets, and I employ 2,700 men. Nineteenths of my trade is done with India, Australia, Africa, and England; consequently I either have to close down or come over to you.' This is only one instance among many. He said he expected the day would come, but he felt confident for some time that British stupidity would hold the field

"To show you how much alive the Canadians are to their own interests I will quote an instance that just lately occurred. The Canadian Government found that a tremendous amount of logs were going into the States and but little sawn timber, consequently they prohibited the importation of logs into the States. Within three days of this becoming law the American Government prohibited sawn timber, but now impose a duty. What has happened is that the saw mills are having a great boom, and the Americans are coming over and erecting their mills in Canada.

"If our own Government had only had as much sense the same course would have been pursued with flour coming from abroad, or a hundred and one other parallel cases. It must come from the people. The voice of the men who now have only a bare living must be heard with no uncertainty. They must make no mistake at the next general election. Whether he be Liberal or Conservative, if he is in favor of the closed door protection, give him your vote. It makes me unhappy to contrast the two countries, but once get adequate protection and England can still stand in her old place as head of all nations of the world. Her sons shall not bow their heads in shame when they hear foreigners call her stupid and hide-bound, and, given protection, we shall see a steady flow back again to the Old Country of the sons who left because foreign manufactured articles took their bread out of their mouths. That the day will not long be delayed I pray daily. If long delayed the capital of the country must come over here, as investments yield more certain and larger interest. England, awake."

WIRE NAILS TACKS WIRE

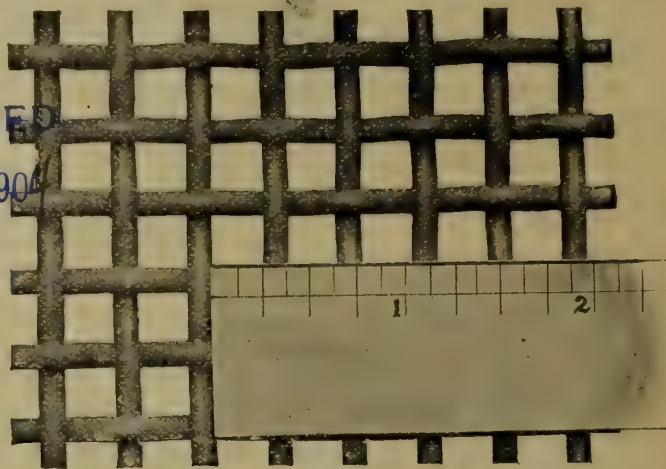
Prompt Shipments

The **ONTARIO TACK CO.**
Limited
HAMILTON, ONT.

HOW TO MEASURE WIRE CLOTH AND WIRE.

A GREAT deal of annoyance and loss is occasioned by the confusion of the terms used in measuring wire cloth. In the more open sizes of heavier wire such as used in mining, quarrying and pits, known technically as "screening," the opening is measured between the

wire or sheets, that unless clearly otherwise mentioned, these goods will always be sent by Imperial Standard, which was adopted in Great Britain March 1, 1884, and has been used by the principal manufacturers and importers ever since, but was only adopted by our Government in Mr. Fielding's Budget

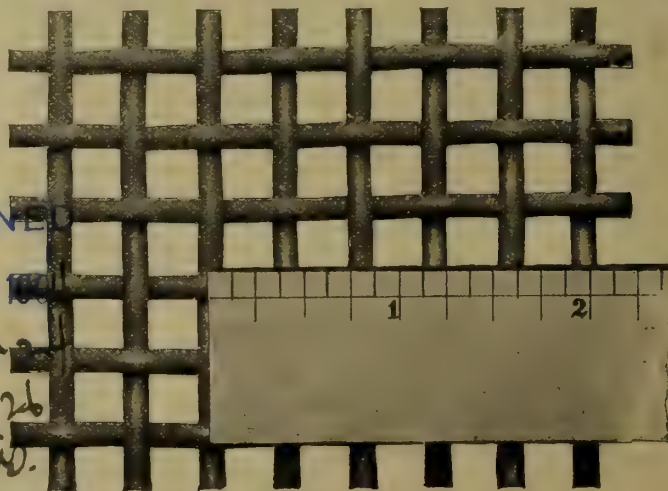


Showing $\frac{1}{4}$ in. space No. 10 wire.

wires and is known as "space," but in all other wire cloth, or what is technically known as wire cloth, the opening is not measured in the clear or between wires, but from the centre to centre of wire.

To demonstrate this more clearly we show two prints of wire cloth which are identically the same, with rules on

Speech of June 7, the present year. This is most important, as no other gauge is now recognized by the Canadian Customs Department. Copper and brass, as well as zinc, are measured by other gauges. When great exactness is necessary it is very much more satisfactory to order goods by the micrometre gauge or decimals of an inch.



Showing $2\frac{1}{2} \times 2\frac{1}{2}$ mesh. No 10 wire.

them, showing one being measured by "space," i.e., $\frac{1}{4}$ -inch between the wires, and the other being measured by "mesh," i.e., $2\frac{1}{2}$ openings, including wires, to the inch.

We also find that there is a great deal of confusion in the sizes of wire owing to the number of different gauges used, and readers of Hardware and Metal should always bear in mind when ordering any goods of iron or steel, whether

ONTARIO ASSOCIATION TO MEET.

The Autumn convention of the Master Plumbers' Association of Ontario will be held in Peterboro, Ont., on Thanksgiving Day. Members of the association are requested to keep the date in mind and to make a point of being present. The organization is steadily developing and a full attendance at this meeting will be of general advantage.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Hot Blast Heating Apparatus.

Sheldon & Sheldon, Galt, Ont., have issued a dainty booklet describing the apparatus used in the hot blast system of heating. After a well-illustrated description of the apparatus referred to they cite the uses of the hot blast system as follows: "For heating only," "for ventilating and heating all classes of buildings," "for drying every conceivable kind of product from milk to lumber." The firm offer to furnish estimates for work of the above classes.

Special Fans.

Sheldon & Sheldon, Galt, Ont., have also prepared a smaller booklet giving condensed descriptions of special asbestos fans, designed for special work. This booklet can also be had by anyone interested.

Walker Steel Range Co., Limited.

The Walker Steel Range Co., Limited, Windsor, Ont., have prepared a 24-page catalogue containing illustrations of seventeen different designs of steel ranges, oak heaters and hot blasts made by this firm. It will be remembered that this firm was organized to do business in Canada less than a year ago. It is only a few weeks since they started manufacturing, yet the illustrations in the catalogues are of the highest standard, showing a most interesting line of stoves. Any of the trade who have not secured a copy of this catalogue should write for one at once.

Ontario Lead and Wire Co.

The Ontario Lead and Wire Co., Toronto, have gotten up a handy catalogue of the "Made in Canada" enameled ware for which they are headquarters. Included in their specialties are shown open lavatories, pedestal drinking fountains, tub baths, showers, and combination needle and shower baths, closets and water heaters. Any of the trade who have not secured this catalogue should write for it.

The Art of Cooking.

The Guelph Foundry Co., Limited, Guelph, Ont., have issued for general distribution a booklet on "The Art of Cooking," the objects of which are to instruct housewives and others in the art of cooking and incidentally to demonstrate to them the beauties and advantages of the "Grand Idea" range. Dealers should find this helpful in making sales of this stove. The firm who backs up their agents in this way does wisely.

Big Floor Finish Sales

Big sales and good profit await S.W. P. agents who push

SHERWIN-WILLIAMS

MODERN METHOD FLOOR FINISHES

this fall. The market is at hand; finished floors are the fashion; paint, varnish, stain, or wax is in demand in every household.

The special advertising back of S-W. Floor Finishes will stimulate this demand in every territory—right in your territory. We are advertising Floor Finishes direct to the women of the household and referring them to the S.W. P. agent for the finish they require.

This advertising will bring *immediate* returns. Better stock up at once—get this profitable trade ahead of the other fellow.

Write for details of Special Campaign.

Modern Method Floor Finishes are made to wear—to satisfy every user. Each finish does its work in the best possible way. They hold trade.



THE SHERWIN-WILLIAMS Co.

PAINT AND VARNISH MAKERS.

Canadian Headquarters and Plant: 639 Centre St., Montreal.

Warehouses: 86 York St., Toronto; 147 Bannatyne St., East, Winnipeg.

Imperial Steel and Wire Co:

The Imperial Steel & Wire Co., Collingwood, Ont., have issued several booklets for the information of the trade and public about their wire products. Copies will be sent free to any of the trade who mention this paper.

TRADE INQUIRIES.

WIRE CLAMP WANTED.

Editor Hardware and Metal:—Can you tell me where we can secure a clamp for drawing together two ends of wire and holding them so that they can be conveniently tied together? There are several on the market, I understand, and I would like to know which is the best. The trouble with most of them is that they do not leave enough room for the hands to tie the ends together.

Wire Manufacturer.

Ontario, September, 1904.

STEEL BOBBINS WANTED.

The B. Greening Wire Co., Limited, Hamilton, Ont., desire to secure 2,000 bobbins stamped out of 14 gauge steel, 14 inches diameter, 5 inches long, with 1½-inch spindle, to hold about 10 pounds

of wire. They would like to hear from any firm willing to supply same.

BIG CONTRACTS AWARDED.

YESTERDAY contracts were awarded for the big power distributing station to be erected for the Toronto and Niagara Power Co. on the Davenport road just outside the city limits. The cost will be slightly more than \$100,000, the building to be completed in a year. The successful tenderers were: E. Gearing for brick, stone, cement, carpenter and cut stone work; T. J. Kelly, the excavating; J. Gillen, the galvanized iron work; A. M. Brown, the painting and glazing; the Canada Foundry Co., the steel and iron work, and Hoidge & Sons, the plastering. The company has placed an order for the four large turbines which are to be placed in the immense power house now nearing completion on the Canadian side of the Falls, to the I. P. Morris Co., Philadelphia, Pa. Each of these turbines will be of 10,000 horse power capacity.

Business Changes

ONTARIO.

THE Globe Paint Co., Limited, Toronto, have obtained winding-up order. E. R. C. Clarkson interim liquidator.

M. Greenspoon, general merchant, Hawkesbury, has assigned.

Thomas Watson, harness maker, Parkhill, has sold out to M. Fenn.

The assets of J. E. Langlois, general merchant, The Brook, are to be sold.

J. W. Dickson, hardware dealer, etc., Dundas, has sold out to R. C. Webber.

A. T. McArthur, Perth, Ont., has bought out Campbell Bros., of the same town.

T. J. Sheppard, general merchant, Flesherton, has advertised his business for sale.

T. Longchamp, general merchant, Piperville, has been succeeded by J. Farand, Jr.

Gillies & Martin, foundrymen, Teeswater and Listowel, have sold the Listowel branch.

J. Northcott, general merchant, Vanleek Hill, has been succeeded by D. J. Jamieson & Son.

Toronto Bolt and Forging Co., Swansea, suffered loss by explosion, covered by insurance.

The stock of Powell & Co., general merchants, Tilbury, has been sold at 62½ cents on the dollar.

The Ewart Wagon and Carriage Works, Limited, Toronto, have made application for winding-up order.

E. Cameron, general merchant, Gordon Lake, has assigned; meeting of creditors announced for September 8.

QUEBEC.

E. Renaud, general merchant, Naperville, is dead.

The assets of L. H. Chouinard, general merchant, Matane, have been sold.

The assets of J. F. C. Martel, general merchant, Sayabec, have been sold.

U. Matte, general merchant, St. Raymond, has assigned to V. E. Paradis.

The assets of E. L'Ecuyer, general merchant, St. Polycarpe Jc., have been sold.

Alphonse Guimond & Co., hardware and paint dealers, Montreal have assigned.

O. Lemaire, carriage maker, St. Zephirm, has assigned. Kent & Turcotte, curators.

G. Premond, general merchant and harness maker, Warden, is asking for an extension of time.



The Lever that makes it Safe

To HAMMER the HAMMER

IF IT IS AN IVER JOHNSON

Our literature, especially "shots" describes this safety feature minutely; tells just how it works, why it works, and why it makes every Iver Johnson safe—absolutely. Send for free copies.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS

FITCHBURG, MASS.

Chas. N. Fortin has registered under the style of the Royal Foundry Co., Montreal, (St. Louis).

Joseph J. A. Murphy has registered under the style of D. Murphy & Co., saddlers, etc., Montreal.

Mrs. J. Cyr, general merchant, Little Cascapedia, has been burnt out. She is offering to compromise.

Pierre Lapointe has registered under the style of V. Lapointe & Co., plumbers and tinsmiths, Montreal.

Thos. Gilmour, of Gilmour Bros. & Co., dealers in wholesale hardware and druggists' sundries, Montreal, is dead.

A meeting of the creditors of Narcisse Leclerc, general merchant, French Village, was advertised for September 13.

A meeting to appoint a curator to Ignace Marquis, general merchant, Sorel, was advertised for September 20.

Demers & Larose, general merchants, Thetford Mines, have dissolved partnership. The business is being continued by M. Demers.

St. Arnaud Freres, stovepipe manufacturers, etc., Montreal, had their premises damaged by fire and water. Loss covered by insurance.

E. N. Heney & Co., wholesale saddlery hardware dealers, Montreal, have

dissolved partnership. Wm. F. Heney has registered as vice-president of the company.

Consent of assignment of the Sheffield Cutlery Co. (A. D. Leblanc, proprietor) has been filed, meeting to appoint curator was to have been on the 13th inst. Lamarche & Benoit curators.

NEW BRUNSWICK.

H. McKenna, general merchant, St. Stephen, is dead.

A. Gratton, general merchant, Buc-touche, is dead.

MANITOBA AND N.W.T.

A. E. Sibbald, general merchant, Hal-brite, has sold out.

A. W. Heath, general merchant, Gilbert Plains, has sold out to Mr. Smith.

T. A. Hatfield, general merchant, Calgary, has been succeeded by Hatfield & McLaren.

G. W. Ludlow, general merchant, Bal-carres, has admitted J. K. Knaus to partnership.

A meeting of creditors of Martin & Co., general merchants, Churchbridge, was announced for September 3.

BRITISH COLUMBIA.

The stock of J. Shortreed, general merchant, Abbotsford, has been sold by mortgage to J. P. Sim & Co.

September 17, 1904

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO. LIMITED

TEMPORARY WAREHOUSE:

212-218 COWAN AVENUE, TORONTO.

Wholesale
only

Only
wholesale

Sample Room at 21 SCOTT STREET, Telephone Main 4056.

Telephone:—Office, Park 1584.

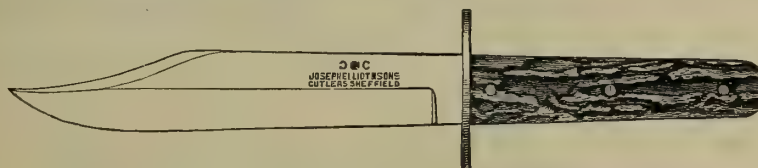
(Where orders may be left if not convenient to visit our Warehouse at Parkdale.)

Telephone:—Warehouse, Park 1585

SPORTSMEN KNIVES

RETURNED

SEP 17 1904



Sheath Knives with Leather Case.

RETURNED

SEP 17 1904



RETURNED

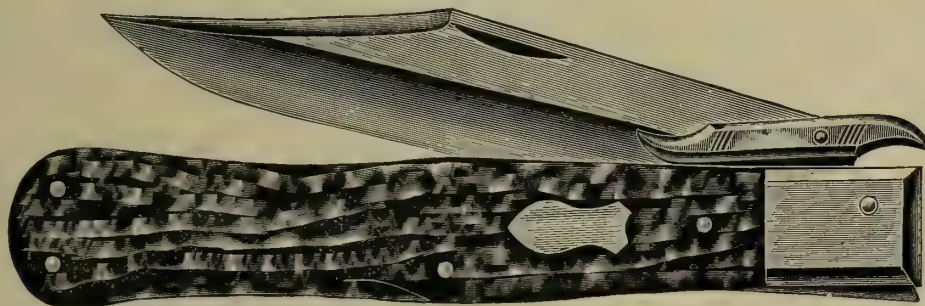
SEP 17 1904



Cocoa Handles, 3 1/4-in. Steel Knife and Fork.

RETURNED

SEP 17 1904



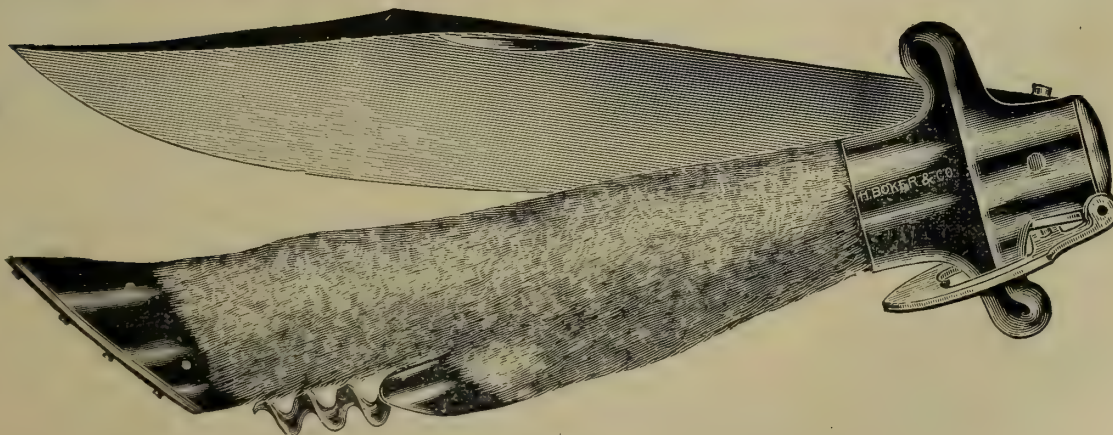
Stag Handle, Spring Back.

RETURNED

SEP 17 1904

Cut Book 23

Page 72
C.W.



Deer Foot Handle, Spring Back Nickel-Plated Bolster.

FOR FULLER PARTICULARS SEE OUR CUTLERY CATALOGUE.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.

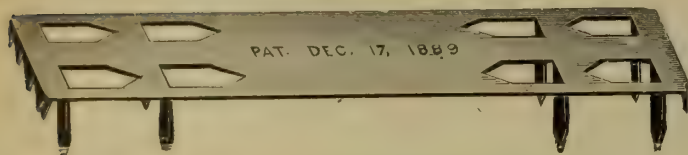
Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

TO MERCHANTS, MANUFACTURERS, IMPORTERS and EXPORTERS



PATENT SELF-DRAWING STRAP.
On Reels of about 5,000 feet each.



CLUTCH NAILS for CORNERS of CASES.

Made in 3 sizes.



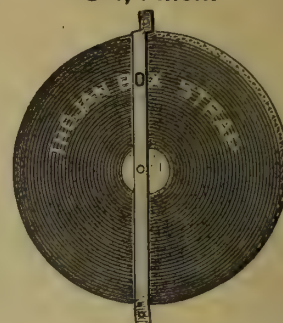
TROJAN BOX STRAP.
On Reels 300 feet each. Packed 20 Reels to the case.

Made in 4 Widths, 1-2, 5-8,
3-4, 1 inch.

A "STRAP" in time saves nine.

Order a supply of my Shipping Specialties and
save claims through goods being lost
or stolen in transit.

Catalog and Samples sent for the asking



43 Scott St.
TORONTO

J. N. WARMINTON

207 St. James St.
MONTREAL

A HARD HITTER.

RETURNED

NOV .3 1904

Cut Book 26

Page 25
ans.

FAIRBANKS POWER HAMMER

(Dupont Patent.)

Hand Forging

vs.

Forging with
Fairbanks Hammer

One man and helper
required.

25 blows per minute.

One hour's time con-
sumed.

Poor results.

One operator only
required.

500 blows per minute.

Five minutes' time con-
sumed

Excellent results.

SEND FOR CIRCULAR.

THE FAIRBANKS CO.

MONTREAL. TORONTO. VANCOUVER. WINNIPEG.

MACHINERY

MACHINERY MARKETS.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Sept. 15, 1904.

WHILE no particularly large specifications have been put through during the last week, the local machinery market is nevertheless in a healthy condition. A short time ago a few large orders occupied the attention of local machinery houses, and there were very few small orders. Conditions are now reversed, there are no large orders and there is little large business immediately in sight, but the aggregate of small business is satisfactory, and the outlook is considered by shrewd judges of the market to be fairly good. A few inquiries for machine tools point to business later on, and small engines and boilers are in average demand. Wood-working machinery is still in good request.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street E.
Toronto, Sept. 15, 1904.

THE demand for all classes of machinery and power equipment during exhibition fortnight proved excellent. Business, as is usual at this season, is improving, particularly for electrical equipment, though there is a good inquiry for both wood-working and metal-working machinery.

Most Powerful Locomotive in the World.

AN engine has just been built for the Baltimore & Ohio Railroad that is not only the largest in existence, but unquestionably the most powerful in the world. "Apart from its dimensions," says Cassier's Magazine, "the engine is also noteworthy as being the first engine in the United States to be compounded on the 'Mallet' system, though there are hundreds of engines of that type, large and small, now in use on various European railways. Essentially, the 'Mallet' system of compounding consists in the employment of two high pressure cylinders driving one set of coupled wheels and carried by the main frames, and in the use of two low-pressure cylinders for driving another set of coupled wheels, these cylinders and wheels being mount-

ed in a pivoted bogie frame. In the American engine there are two sets of six-coupled wheels, making twelve driving wheels in all. The engine is, moreover, nearly twice as large as any 'Mallet' engine previously built.

"Engines with twelve driving wheels arranged to two sets of six, are not unique in American practice, and even engines with tender coupled wheels are not unknown; but arranged in the 'Mallet' fashion, the type is quite new to the United States.

"The cylinders of this huge engine have the following diameters: high-pressure, 20 inches; low pressure, 32 inches; stroke, 32 inches. The wheels are 56 inches in diameter, and the coupled wheel base — the actual right wheel base of the engine—is only 10 feet, though the total wheel base is 30 feet 8 inches. The high pressure cylinders are supplied from the boiler in the usual way, but, owing to the low pressure cylinders being arranged on a pivotally arranged truck, a flexibly converted receiver pipe is employed between the high and the low pressure cylinders. The boiler pressure is 235 pounds to the square inch, but as the receiver pipe is subjected to a pressure of only about 60 pounds per square inch, it is easy to make the joints steam tight. A separate exhaust valve, similar to that used for the Richmond two-cylinder compound locomotive, is fitted to the high pressure cylinders, while boiler steam can be admitted to the low pressure cylinders through a reducing valve for starting or when extreme power is required.

"The valve gear is that known as the 'Walchaert,' a gear which is greatly favored on the European continent though it is not used largely in Great Britain or America. It was adopted in the present instance owing to the fact that all its parts are outside the driving wheels, leaving the space between the frames available for the receiver pipes and other parts.

"The engine is reversed and the cut off regulated by a compressed air reversing apparatus, designed by Mr. Carl J. Mellin, who was the engineer in charge of the design of this locomotive. This power reversing gear has worked very satisfactorily, and it will be of great help in reducing the work required by a locomotive engineer in handling this immensely powerful machine. The tender, and a large part of the details of the locomotive, are Baltimore & Ohio

standard, and the engine will be used on the Baltimore & Ohio for pushing service on the heavy grades.

"The locomotive has been designed with great care, with a view to maximum durability, and it is noteworthy that it was finished complete without a hitch or interference of any part with another, the design working out exactly as planned in every respect. The weight distributed especially is exceedingly satisfactory, there being a difference of only 900 pounds between the weights on the back and front sets of driving wheels. Considering the fact that no locomotive of any such size has ever been built, and that the design was practically new throughout, this statement shows the great accuracy of the calculations made.

"Notwithstanding the immense weight and power of this locomotive, the fact that the driving wheels and cylinders are divided into two sets enables parts to be made of ample strength, and yet with reasonable weight, the connecting rods, cross-heads, and all part of the valve gear being considerably lighter than those used on many of the heavy locomotives of the ordinary type.

"In case the machinery in connection with one set of driving wheels becomes disabled, the locomotive could be run at one-half its power with the remaining set, and the change in this respect could be accomplished with very little difficulty, and by a locomotive engineer on the road.

"Before being sent to St. Louis, the engine was subjected to a series of trials on the grade of the New York Central Railroad at Schenectady, and these trials, besides being satisfactory in other respects, gave very good results regarding economy of fuel consumption."

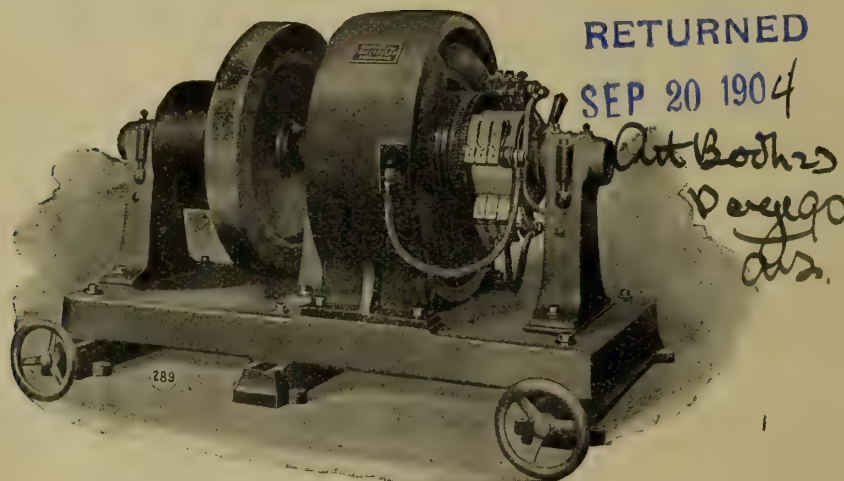
BOX STRAPPING.

Merchants will find it to their interest to look at J. N. Warminton's advertisement of shipping specialties to be found elsewhere in this issue. Nothing occasions more worry and correspondence than to have customers write complaining of shortages in a shipment of goods. This can only be avoided by careful packing which prevents cases being broken open and goods being lost or stolen in transit. The shipping specialties offered the trade by Mr. Warminton would at small cost insure against such troubles.

GENERATORS FOR GAS ENGINE PLANTS.

ON this page is illustrated a line of direct current generators which are especially designed for use in connection with gas and gasoline engines. For this purpose, on account of the irregular impulses of the engines, it is necessary to provide a fly wheel which will overcome the fluctuations of the dynamo speed and produce a steady light, which is impossible where the irregularities of the engine speed are reproduced in the armature of the dynamo. This requirement has sometimes been imperfectly met by placing a heavy fly wheel upon an extension of the armature shaft, without providing any additional support for this wheel. As standard dynamo bearings are generally not sufficiently heavy to sustain the extra weight of the fly wheel, this method has given but slight satisfaction. In order to satisfactorily overcome these speed fluctuations without imposing unusual strains upon the dynamo parts

As cast steel is used throughout for the magnetic circuit of these machines, their floor space, in proportion to their output, is very small. All parts of the machines are made strong and rigid, so that these machines will safely withstand a momentary overload of 100 per cent. above their rating. The mechanical construction of the shaft, bearings and oil devices is such as to make the operation safe and easy, even in the hands of unskilled operators. The tendency of electrical engineering has been to decrease the speed of all high-class apparatus, and special attention is called to the low speeds at which these machines operate. The low speeds enable the use of large pulleys, thereby giving large belt surfaces and allowing the transmission of the full capacity of the machines continuously without having the belt excessively tight. In this way the wear on the bearings is materially reduced, insuring their long life.



20 K.W., 250 Volts, 750 R.P.M. Dynamo.

special machines have been designed having an extra heavy shaft, which is extended to receive a heavy fly wheel and which is supported by three bearings, two of which are placed close upon either side of the fly wheel, where they will support its weight and receive the extra strain caused by the jerking of the dynamo belt without injurious effect upon the dynamo. These three pedestals, with the machine frame, are mounted upon a heavy iron base, which is carried upon sliding rails with hand wheels and thrust screws, by means of which the belt tension can be adjusted. By this construction the overloading of the dynamo bearings, or the expense of an extra countershaft for carrying the fly wheel is avoided, and a substantial mechanical machine, capable of producing a steady light, is secured. These machines are made in all the usual sizes and speeds from $\frac{1}{2}$ to 30 kilowatts.

Shunt-wound machines run at approximately constant speeds under all loads and are considered standard. Compound-wound machines give from 15 to 20 per cent. drop in speed from no load to full load, and should be used wherever constant speed is not essential, if the load is subject to wide and sudden fluctuations. They are specially desirable for driving such machines as pumps, air compressors, punch presses or metal planers and should also be used when the voltage of the supply circuit is subject to sudden and wide fluctuations, as when operated from street railway circuits.

The brushes are of radial carbon type, equipped with adjustable tension for each carbon, the holders being so constructed that the carbons may easily be removed. The carbons are of such number and cross section that the current dens-

ity at full load does not exceed 30 amperes per square inch, thus insuring a cool running commutator. Each carbon has a flexible copper connection securely fastened thereto, so that the transmission of the current through any sliding contacts is not depended upon.

The armatures are of the iron clad pattern with bar windings or with machine-wound wire coils, as the capacity may dictate. These armatures are provided with ventilated laminated cores, mounted upon spiders in such a manner that the shafts, if accident should require it, may be removed without disturbing the core. The core is constructed of the best grade of electrical sheet steel, and the discs are insulated from each other, thereby reducing the induction losses in the core, making high efficiency easily attainable. The armature coils are machine wound and formed, therefore they are duplicates and interchangeable.

The bearings are of the self-oiling pattern, and are lined with interchangeable phosphor bronze sleeves, so that their durability is unsurpassed. They are provided with large oil wells, so that a copious supply of cool oil results in the operation of the bearings at low temperature.

The commutator is constructed of drop-forged or hardened copper segments of uniform high quality. All the joints between the commutator and conductors are large, so that their resistance is reduced to the smallest amount and the likelihood of abnormal heating is entirely removed.

All these machines are so constructed that they may be inverted and suspended from the ceiling should it be desirable to so install them. The design and construction of this modern type of machine is such that practically all sparking is eliminated, as it is possible, after the brushes are once adjusted, to change from no load to full load, or vice-versa, without necessitating the readjustment of the brushes. This is an item of great importance in the selection of a machine. Owing to the fact that these machines are of the open type, also that special attention has been given to their ventilation and the abundance of material in proportion to their ratings has been provided, they operate at very low temperatures. After a continuous run of ten hours at their rated load the rise in temperature above the surrounding air will not exceed 40 degrees centigrade on the armature and 50 degrees centigrade on the commutator.

These machines are manufactured by The Commercial Electric Co., Indianapolis, Ind.

Governing an Engine.

AN engine which always works with a constant load would have a constant speed, provided the steam-pressure did not vary. In practice, however, the load on a steam-engine changes from time to time; and in electric lighting, although these changes are rarely sudden, nevertheless they are very great, since the number of lights in the daytime may be very small, and in the early evening the engine may have to carry its full rated load. The fly-wheel acts to prevent sudden or transient changes in speed due to variations in the load on, or power of, the engine during a single stroke; but something is required to regulate for changes in load that are permanent, or at least last for several strokes.

The device used to secure this control of speed is called a governor; and it acts either to regulate the supply of steam by changing the opening, to a greater or less extent, of a valve in the main steam pipe or by automatically changing the point in the stroke at which the steam is cut off. These two types are called respectively, throttle valve and automatic cut-off governors; and either of them requires to be adjusted to admit just sufficient steam to give the power necessary to maintain practically the same speed whatever the load may be. The throttle valve governor was the only one employed up to the time when Corliss invented and introduced his remarkable automatic cut-off valve-gear, that is one of the greatest improvements in steam engines since the time of Watt, and which to this day is used with only slight modifications, in many of the largest and best stationary engines in America and Europe.

The throttle valve governor is not usually considered advisable in this country, except in small or unimportant engines. It has the defect that it acts to destroy a portion of the pressure of the steam or "wire-draw" it. This obviously reduces the efficiency of the engine; but the super-heating of the steam which results from its being "wire-drawn" through the throttle valve almost makes up for the loss of pressure by diminishing cylinder condensation. The Willans engine which is extensively used in English lighting plants, and is now being introduced into this country, has a simple throttle valve governor. It is claimed that this engine gives economical results in actual use that are fully equal to, if not better than, those

obtained by automatic cut-off engines, probably because the loss, due to diminished pressure, is partly offset by the gain due to super-heating, as already stated. Furthermore stations employing Willans engines usually subdivide the power into a number of units, only a sufficient number of engines being run to properly carry the load, thus making it unnecessary to throttle the steam supply, since the engines are almost always running at or near full load, and the governors only require to regulate for small fluctuations. Willans engines are compound or triple expansion, which also tends to make them economical. An automatic cut-off governor, on the other hand, allows the steam to enter the cylinder at full pressure for a certain fraction of a stroke, and then the steam is suddenly cut off. This is theoretically and practically a more economical use of steam, and would seem to be very important in engines working at light load for any considerable portion of the time. But, unfortunately, cylinder condensation, causes great losses, particularly with an early cut-off, which the super-heating due to throttling reduces, as we have seen; consequently, the automatic cut-off is not so much better than the throttle governor as it has generally been supposed to be.

The throttle valve governor is very simple in its construction, being merely a pair of weights suspended from a vertical spindle; and caused to revolve by connecting it with the main shaft through gearing or belting. When the speed rises above the proper point, the weights fly out by centrifugal force, which partially shuts the valve in the steam pipe by means of levers and rods.

The automatic cut-off governor exists in many different forms, which, however, may be arranged in two general classes. First, those in which the cut-off is controlled by a centrifugal governor similar to the device just described; Corliss engines being of this type. Second, those forms of governor which are mounted upon and revolve with the main shaft of the engine, and are called shaft governors. This latter type has several very important advantages; being carried by the main shaft, it does not have to be driven by belting or gearing, which involves complication, indirectness, is more or less unsightly, and likely to fail and allow the engine to race. The shaft governor being upon the shaft, is directly connected to the eccentric, and thereby con-

CONDENSED MACHINERY ADS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
" " 6 months.....	10 00
25 " " 1 year.....	10 00

MACHINERY WANTED.

Items under this heading inserted free for readers of
HARDWARE AND METAL

GASOLINE ENGINE WANTED—Six horsepower, complete; cash price. S. S. Morris, Rodney, Ont.

SMOKESTACK WANTED—40 or 50 feet of 24-inch stack; new or second-hand; in first-class condition; also small lath machine. Box 80, Providence Bay, Ont.

SCALES—Heavy; double iron column dormant scales; double beam; for grain warehouse. Box 36, Hensall, Ont.

WANTED—Second-hand duplex pump; about 10 x 6 x 12; state particulars by letter. John E. Russell, 908 Queen street east, Toronto.

WANTED—Second hand water wheel; 36 in. or over; left hand. Woods Bros., Napanee.

WANTED—One heavy carriage; to open not less than 54 inches; also four-side sticker, 9 or 10 inch, and 5,000 ft. of 1" or 1½" pipe. Apply Box M 172, HARDWARE AND METAL, Toronto.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ENGINE FOR SALE—110 h.p. wheellock automatic engine 14 x 34, built by Goldie & McCulloch, Galt. First class order; price low. Address Alfred Rubbra Machinery Exchange, 22-24 Victoria Square, Montreal.

ELECTRIC LIGHT PLANT—Western Ontario; good town; fine plant; clearing over two thousand dollars annually; \$9,000. Chaplin & Stoddart.

INDUCTION MOTORS, made by Brown, Boveri & Co., Baden, Switzerland, excellent design, low prices; prompt delivery from stock. Campbell & Renton, Kingston, Ont.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal

PORTABLE BOILER and engine, planer and matcher, for sale, cheap. G. Halliday, Elgin, Ont.

IF you want to Buy Machinery of any kind We will insert an Announcement Free.

IF you want to Sell Machinery of any kind We will introduce you to hundreds of buyers.

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Information Bureau

Hardware and Metal and Canadian Machinist
MONTREAL TORONTO WINNIPEG

trols the action of the valve effectively and conveniently; but a shaft governor requires a considerable speed of rotation in order to give sufficient centrifugal force to operate it, and is therefore only applicable to high-speed engines of 200 or more revolutions per minute. The shaft governor contributes more than any other element to the compactness, perfection of regulation, and general success of the high-speed automatic cut-off engines which have been so very extensively used for electric lighting in America, and are so convenient for small plants.

Dr. F. B. Crocker says that any form of governor in order to give perfect regulation, that is, maintain a constant speed, must be designed in accordance with certain mechanical principles of which the general condition to be fulfilled is that the governor must move from one limit of its throw to the other with a very small change in speed, usually about one or two per cent. This requires that the centrifugal force shall be practically equal to the force due to the spring or weight which opposes the centrifugal force, in every position of the governor weights. A governor of this sort is called isochronous, since it will only run at one speed; and the slightest excess of speed will cause the weights to fly out to their extreme limit, and either throttle or cut off the steam, so as to bring the speed down again to its normal value.

To Prevent Gasoline Explosions.

MARSHAL HALSTEAD, U. S. Consul at Birmingham, Eng., reports the production of a device to prevent oil or gasoline explosions.

"The Nonex" is a device which, according to public tests made recently in London, renders all receptacles containing inflammable liquids comparatively secure from explosion. The device is an application of the principle of the Davy lamp, supplemented by a fusible cap or plug.

If a vessel of ordinary type containing an explosive liquid be subjected to sufficient outside heat, or if the contents be lighted at the orifice, the walls of the tank will burst by the force of the expansion. At an exhibition given by the owners of the patent, the Non-Explosive Device Co., a 20-gallon tank was partly filled with gasoline and placed upon a lighted bonfire. The fusible screw cap, made in two parts which were simply soldered together, soon blew out,

the solder having melted, and the ascending vapor caught fire immediately; but no explosion followed because the orifice of the tank formed the upper end of a tube which projected down inside the vessel to its bottom, where it was closed. To allow the oil or gas to percolate from the interior of the tank each of the metal layers of which this tube was composed had been perforated, and, while the perforations would permit the spirit to be poured out, they prevented the passage of the burning gas to the interior by absorbing its heat as the wire gauze does in the Davy lamp. While the gasoline contained in the tube burned the flame did not extend to the liquid or accumulated vapor in the half-full tank and, consequently, there was not sufficient expansive force generated to burst the tank. The flame was easily extinguished with a bundle of rags and then lighted and put out several times. The gasoline would, I judge, percolate constantly through the perforated layers of metal to the inside of the tube and there keep up a continuous burning; but according to the accounts of tests which I have read, the flame does not appear to have been allowed to burn any length of time to see how long the metal layers of the tube could absorb the heat without becoming so hot that they would heat and dangerously expand the gasoline in the tank. A motor car tank to which the device was affixed was lighted with a match and extinguished at will. A gasoline can without the device exploded almost instantaneously when lighted.

The device applied to small gasoline cans, kerosene drums, and other petroleum containers would undoubtedly serve a desirable purpose.

Was Copper Ever Tempered?

THIS pertinent question has been asked recently by the Iron and Machinery World, which expresses profound doubt as to whether the "lost art of tempering copper" ever existed anywhere to be lost by anybody. The question aroused some interest and any information that was called forth on the subject was to the effect that there is no direct proof that such an art ever existed. An expert mining engineer of New York writing to a paper there said:

"No tools of tempered copper that will, for instance, cut rock, have ever been found. I have personally inspected some of the most ancient rock mines

in the world, in Spain, Cornwall, Pan-
nonia (Hungary), Asia Minor and else-
where. The marks upon them are all
those of steel tools.

"This, of course, is only negative evidence," continues the journal, "and therefore not conclusive, in the strict sense of that term, but it is very strong evidence for all that, and, taken in connection with the complete absence of, tempered copper tools from the relics of the past collected in innumerable museums and elsewhere, makes it practically certain that the many geniuses who limit their claims to the discovery of the art of tempering copper are altogether too modest. Whoever attains that rather desirable end can safely assert that he has done what man has never done before, and that his "art" is wholly new. The question that interests us is why the tempered-copper people do not seek the higher fame of original achievement. To do what they have heard the Phoenicians—sometimes it's the Egyptians or the Chinese—did once upon an unrecorded time seems to be the limit of their ambition, and most of them have the vaguest of notions as to the advantages that would follow success in their chosen task. Not long ago a man of the true metal-worker type, lean and dark, brought to this office some rough tools that looked as if made of copper. They had edges that would cut wood and paper. He confidently announced that an industrial revolution was at hand, but we have never heard since either of him or his revolution. Perhaps he was discouraged while trying to figure out the use of making tools out of an expensive metal instead of a cheap one."

FOREIGN TIN MARKET.

In tin attention has chiefly been centred upon the big purchases which mature during September, and the course of action to be adopted by those into whose control the metal will then pass. Should it be decided to take up the tin, then conditions of stringency might arise having a temporary upward effect upon values, but the general market view seems to be that nothing of this sort is contemplated, and that the metal will be rendered available for borrowing purposes and quietly liquidated as occasion offers. Whatever course of action be adopted, the immediate future of the market seems to depend a good deal upon the policy adopted in this matter.—The Ironmonger.

IT WILL PAY YOU



to stock the best globe valves "made in Canada."

KERR'S are made of the best steam metal, accurately fitted and perfectly tight.

CATALOGUE FOR THE ASKING.

THE KERR ENGINE CO.,
WALKERVILLE, ONT. Limited

SPECIFY



INJECTORS

PENBERTHY INJECTOR CO.,
LIMITED.

BRASS MFRS. Windsor, Ont.

"MAPLE LEAF"

Stitched Cotton Duck Belting

MADE IN CANADA



MADE IN CANADA

"Maple Leaf" is made of the best cotton duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.

"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying.

Main Drive Belts a specialty.

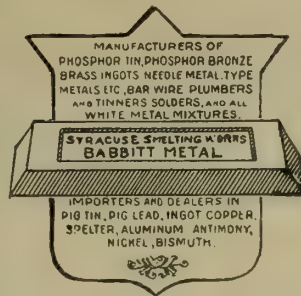
Ask for "Maple Leaf" and take no other.

Beware of Imitations

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY
HAMILTON, ONTARIO. Limited

Use our "MAPLE LEAF" Belt Dressing.



All the babbitt metal for the new battleship "Nebraska" has been placed with the Syracuse Smelting Works. There is likely to be some hot fighting, but not any hot boxes.

Always specify

"MANGANESE"
Anti-Friction Metal

to avoid trouble.

Syracuse Smelting Works,

Montreal,
New York,
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ASK YOUR DEALER FOR IT.

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels
Superior in Design, Workmanship
and Finish, and the most popular
Gun on the Market.



Simplest
"Take Down"
Gun Made

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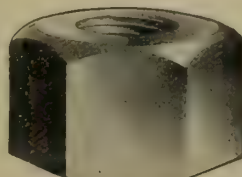
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QUALITY & PRICE TO SUIT
ALL GRADES OF WORK

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STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



REMEMBER

We are the only Canadian manufacturers of

COLD PRESSED NUTS

Finished, Semi-Finished, Case Hardened,
Plated, Polished, etc.

SPECIAL DISCOUNTS TO THE TRADE

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Head Office and Works, TORONTO, ONT.

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ELECTRICAL GOODS AND SUPPLIES

EUROPEAN ELECTRICAL ENGINEERS IN CANADA.

WHEN it was decided to hold an International Congress of Electrical Engineers at the World's Fair at St. Louis the American Institute of Electrical Engineers proposed a pleasure tour for the foreign delegates on their arrival in New York. Through the instrumentality of Prof. Owens, of McGill University, Canada was included in the route, and last week saw the arrival and departure of these distinguished visitors from abroad, numbering in all over 200.

Their visit in Montreal for two days aroused considerable interest, as the party included men of eminence, not only in engineering and scientific circles, but in the world of manufacture and commerce. Although the bulk of the party, which included ladies, was made up of prominent electrical engineers, there were not a few presidents and managers of large industrial concerns. There were counts and countesses, as well as those at the top of their profession, from the United States, Great Britain, Germany, and Italy, many of whose names are household words in the realm of electrical science and manufacture.

During their stay they were fittingly entertained by the local reception committee, of which Prof. R. B. Owens was president, and H. D. Bain, of The Westinghouse Electric Co., secretary. Prominent on the committee were representatives from The Canadian General Electric Co., The Allis-Chalmers-Bullock Co., Canadian Westinghouse Co., Montreal Steel Works, Canadian Pacific Railway, Grand Trunk Railway, Montreal Light, Heat & Power Co., Montreal Street Railway, Shawinigan Power Co. and other important institutions.

From their arrival on Thursday morning until their departure Friday night the visitors were given every opportunity of getting acquainted with the development of Canada, particularly along

electrical lines. Of this, most of them already had some idea, as our possibilities in that direction have aroused interest throughout the entire engineering world. On Thursday an official welcome was extended by the city, and a boat provided by the civic authorities to convey the party down the Lachine Rapids. A visit was made to The Light, Heat & Power Co.'s sub-station, where luncheon was served, and to the plant of the Montreal Street Railway. At McGill University, where a reception was held in the afternoon, universal admiration was expressed at the completeness of the engineering equipment. A garden party at the Forest and Stream Club House, Dorval, ended the first day's entertainment.

On Friday a special train over the Great Northern took a large contingent to Shawinigan Falls, where the visitors were given a chance to study the wonderful water power development at that place. The carbide works were first inspected and an opportunity given to see calcium carbide manufactured on a large scale. After an elaborate dinner, given by the officers of the Shawinigan Power Co., the engineers were taken to view the falls, and to see the power houses, where about 20,000 h. p. of electrical energy are now being developed. A. J. Gorrie, general superintendent, and Guy Tombs, general passenger agent of the Great Northern, accompanied the special, and to them great credit is due for the splendid service rendered. They showed the visitors in a practical way the up-to-date methods of Canadian railways.

Among the visitors was R. Kaye Gray, president of the British Institute of Electrical Engineers, who is managing director of the India Rubber Gutta Percha & Telegraph Co., of London, which employs in the neighborhood of 10,000 hands. The party included Prof. Perry, of the Royal College of Science, London; Dr. R. T. Glazebrook, principal of the National Physical Laboratory of England; Theo. Feilden, managing director of the Electric Publishing

Co., which publishes among others the Electric Magazine; M. Hayashi, son of the Japanese ambassador at the court of St. James; E. Edstrom, of Stockholm, manager of the Sweden Electric Co., the largest in the country; B. J. Arnold, president of the American Institute of Electrical Engineers; Chas. F. Scott, chief electrical engineer of the Westinghouse Co., and many other well-known figures.

Terminals for Flexible Conductors.

ALL those who have attempted to solder suitable terminals to flexible conductors, such as lamp cords, will recall the unsatisfactory results obtained with the material ordinarily available for this purpose. The great difficulty in securing a solid joint is due to the method employed, which requires that the solder be depended upon for both mechanical strength and electrical continuity, the consequence being that, as frequently made or used, the solder which enters the spaces between the strands of the miniature cable deprives the conductor of its flexibility up to a point at which the abrupt change in flexibility causes the individual strands to become severed with repeated movement of the conductor.

A type of connector which removes all difficulties in making a proper joint and yet retains the flexibility of the cable joined is now on the market.

The terminal is punched from sheet copper and differs from other somewhat similar terminals in that a perfect mechanical joint is secured without the use of solder. This result is obtained by forming, during the process of stamping, a small sleeve within the cable portion of the terminal, into which sleeve a short length of the cable, previously having been laid bare, is threaded, and the fully-insulated section of the cable is then bent through 180 degrees to its place, where it is securely held by the outer side leaves, which are squeezed to surround the cable. The joint is electrically completed by a drop of solder, which serves firmly to unite the terminal and the cable.

To Make Iron by Electricity.

AN Ottawa despatch says:—"Important negotiations looking to the establishment in the Ottawa District of works for the smelting of iron ores and the manufacture of iron and steel are under way, and will probably be com-

We make Electric Fixtures, Sockets and Cut-Outs.

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

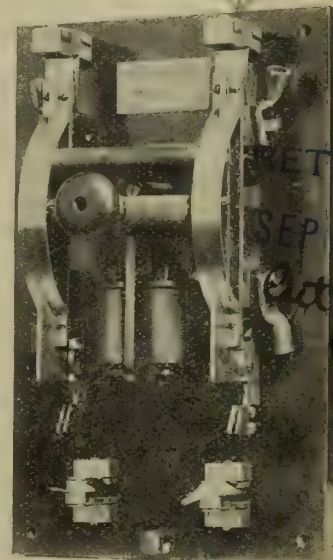
ported at an early date. The essentials for this industry are cheap electrical energy and an abundance of magnetic iron ore. The hydraulic energy for the development of electricity and large deposits of iron ore are to be found near Ottawa, and the particular properties in question are controlled by one gentleman, who is now devoting himself to obtaining the necessary capital for their development. P. Heroult, of La Praz, was here last week looking into the proposition, and is believed to have given it his endorsement. Mr. Heroult is the inventor of the process of manufacturing aluminum, and probably turns out more of the product than any other manufacturer in the world. He also invented the process of making steel by electricity, and at his works at La Praz is demonstrating the commercial feasibility of the method. He controls the patent rights for the electric process, but if, as is believed, he is interesting himself in the development of iron deposits near this city, there will be no hindrance to the introduction of the process here. Experts believe that by the electric process the cost of manufacturing steel can be considerably reduced. If, for example, it can be manufactured for \$12 by the electrode process, whereas it costs several dollars more by the present method, a revolution will be wrought in the iron and steel industry, and Canada will be able to successfully compete in the manufacture of these

products against the rest of the world. All through Ontario and Quebec deposits of iron in great quantities are scattered, and contiguous to them are water powers, which permit of cheap development of electricity. No other country is favored to an equal degree, and it is almost safe to predict that by means of the electric process we are on the eve of an era of phenomenal development in the iron and steel industry in Canada."

Automatic Circuit Breaker.

THE installation of proper electrical apparatus in a building means much to the safety of the inmates. When lights were first introduced the wiring was oftentimes crude and makeshift. Little precaution was taken and safety devices were unknown. Numerous fires and some loss of life attributed to the electric current caused more stringent measures to be made, and the Board of Underwriters insisted that a certain standard be maintained. Power houses were provided with automatic circuit breakers and lightning arresters, but no protection beyond fuses was given the house or store wired for electric lighting. Fuses have been found to act but indifferently at best, and oftentimes in case of a short circuit or indirect voltage from lightning discharge or high potentive wire being crossed with the low, there was chance of considerable damage being done before the

fuse burned out, and even of loss of life. Something more reliable than a fuse has been found necessary, and this is now embodied in the Eureka automatic safety switch, placed on the market by The Sayer Electric Co., Montreal. This switch is well built, strong and desir-

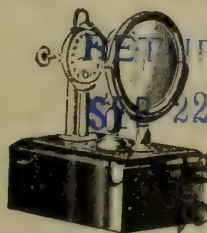


able and handsome in appearance. It acts instantaneously, so that before any damage whatever can be done, by an increased rush of current, the circuit is opened and any further damage eliminated.

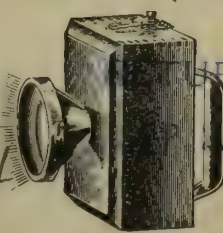
A FEW ELECTRIC LIGHT (BATTERY POWER) NOVELTIES



Electric Rose for
Lapel of Coat or
Hair Illumination.



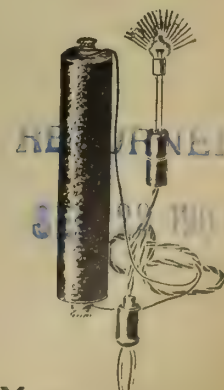
Watch Stand with
Magnifying Glass.



House Lamp or General
Purpose Lantern.



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Lamp.



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Send for Novelty Catalogue No. 20, and ask for trade discounts.

The SAYER ELECTRIC co'y
FOR EVERYTHING ELECTRICAL. 10-14 Beaver Hall Hill, MONTREAL, P. Q.

Window and Interior Displays

Timely Hints and Suggestions

THERE is scarcely a merchant who will at the present day put himself on record as doubting the value of a well-dressed window. It is safe

to say that, save in the most backward locality of the country, where no one bothers to attend to display of any kind, the successful merchant is in every case found to strive after attractive window displays. This fact alone would silence any argument brought against window dressing as a principle. But the merchant who allows an untidy, careless window never argues against the principle, he is in doubt as to the profit that would accrue to him from a display involving both time and expense.

That he will admit the value as a principle should convince him that even in his case there might be profit. Where he so easily deceives himself, is in his idea of the time and expense involved. Neat windows more or less attractive take very little time and can be arranged at no expense worth mentioning. An empty window would be preferable to the dirty, careless windows so often seen, but an hour or two a week would bring results which would change the tone and quantity of business done, and convince the most hard-headed, old-fashioned merchant that window dressing pays. The excuse so often heard that "I have no time," is usually the merchant's interpretation of "I have no inclination," or "I'm too lazy," and the expense cry is, on the face of it, given without any practical idea as to the expense to be incurred. When such a small amount of time and practically no expense is required to produce passable windows, what excuse has the believer in methods of fifty years ago for persevering in his unprogressive ideas?

Man's dislike of untidiness should be sufficient incentive to neat displays. It will always be found that the store exhibiting neatness in the interior, makes some effort to decorate its win-

dows. This the public knows, and concludes that a well-dressed window betokens a neat interior, a careful merchant, and an up-to-date stock.

If window dressing pays, and time cannot be set apart for it the conclusion follows that an extra clerk is required. Window dressing in any community brings as good results as any other feature of the store system. Not only are the direct returns worth considering, but the indirect profits are a big item as well and require just as close attention as an actual customer.

The value of a good window can never be accurately or even approximately calculated, and the merchant who commences dressing his windows after years of inattention to them, only realizes how much they pay, after the work has been continued for a year or more. The expense of a couple of dollars in a window display may not sell that amount of goods apparently, but the moral benefit is worth many times the money spent.

One of the good results of window dressing is the superior class of custom it draws. The wealthy and the good housekeeper (the buyer whose custom counts) will assuredly not patronize the store with untidy windows, but will go where business is carried on under conditions that show progress and a desire to please. It is through his windows that the merchant shows the public that he is after trade and is willing to exert himself to get it. The customer whom the merchant seeks, takes his trade where appreciation is shown, and in modern business a carelessly dressed window denotes a carelessly managed business.

There are so many other good qualities guaranteed in a merchant who has good window displays that the public trust him and feel more sure of being suited in the stock carried, in his method of doing business and in the cleanliness of the goods. The attractive window follows the advertisement in the local paper, and attracts inside the people who have read the paper. Once inside

it rests with the salesmen to bring about a sale; two thirds of the battle, however, is won when the customer enters. "Goods that are well shown are half sold."

The small merchant on the side street argues that dressed windows do him very little good, as he has his regular customers. At the same time his most regular customer will buy on his trips to other parts of the town, if he is stopped on the street by a window display. The elaborate windows of the departmental store may not be suited to the small merchant, but they are not necessary. Neatness and effect can be obtained without nearly so much spectacular display, and the feeling of confidence inspired by such inexpensive but expressive windows will prevent surrounding residents from buying elsewhere. No merchant is too small to profit by a carefully arranged window, and no business is too steady to be uninfluenced by the neater, more attractive windows of a rival. The life of the larger business depends upon its push and wide-awakeness, and even the volume of business done depends to a certain extent upon the slowness and backwardness of small side street merchants who argue that their business does not demand a well-arranged window.

To get an idea of the value of the store front appealing to the public, it is only necessary to observe present-day conditions. All large businesses pay strict attention to their windows. An attractive display will stop a crowd any day. An article seen in a window will prompt a forgetful memory. Luxuries and lines other than staples can be successfully brought before the public in no other way. A common sense appreciation of these facts is all that is required to convert the most pronounced antiquarian as far as correct window display is concerned.

The assets of S. H. Frigon & Co., general merchants, Three Rivers, are to be sold on September 21. Meeting of creditors was held on September 6.

Some Displays at the National Exhibition, Toronto.

ONE visit to an exhibition like the National Exhibition at Toronto would not suffice to give anyone interested in the industrial displays anything like an adequate conception of the manufactured goods shown.

Nor was it found possible to include all the descriptions of exhibits of interest to the trade in one issue of *Hardware and Metal*. Delays due to one cause or another kept back several of the most interesting exhibits, some of which are shown this week.

The Canadian Cordage Mfg. Co.

In a choice situation in the Implement Building, the Canadian Cordage Mfg. Co., Peterborough, Ont., had a display which aroused the attention of farmers, machinery users and contractors as well as of the hardware trade. At one end of the exhibit was a pyramid of "Royal Manila" binder twine, which this firm has made so popular with farmers and with the hardware trade. Next to this were well-arranged piles of cordage in various sizes and for practically all purposes. The exhibit attracted many inquirers and the firm found the fortnight of the Exhibition an excellent one for the distribution of literature, chief of which was a booklet on the progress of the company since its organization, including views of the works, showing what an active and remarkably large concern is necessary for the production of cordage on the scale it is made by this company.

Fairbanks Exhibit.

The exhibit of the Fairbanks Co., Montreal and Toronto, was indeed handsome and educative. The chief products

exhibited were, of course, scales and steam supplies. The exhibit of scales was striking. All kinds were shown, from the simple small beam scales to



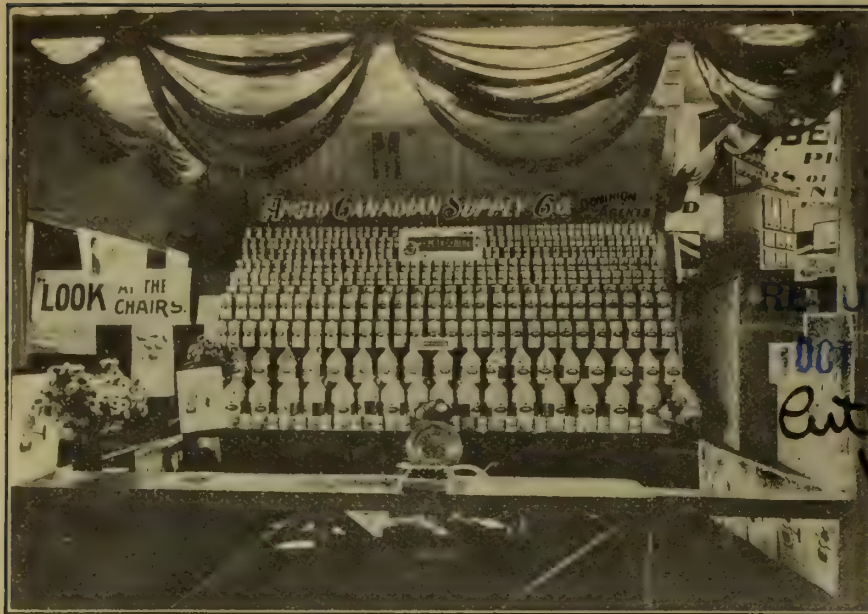
Canadian National Exhibition—Exhibit of Canadian Cordage Mfg. Co.



Canadian National Exhibition—The Fairbanks Co.

the platform scales. An obliging representative of the company was kept pretty busy weighing young ladies and old ladies, children and men, on a large carpeted platform scales.

Among the steam supplies exhibited were: Valves of all kinds, including common globe, globe slot angle, opposite angle, gate, swing check, common check and reducing whistles, steam gauges; metallic packing; wrenches of different kinds; wood split and iron pulleys, forges, shafting and belting. There were also exhibited in motion a hacksaw, a power hammer and lathes, for which the Fairbanks Co. are agents. These machines were driven from an overhead piece of shafting run by gasoline engine, one of the lines manufactured by the firm. In connection with the exhibit the company had a carpeted portion reserved as a sort of reception room, where one might find easy chairs,



Canadian National Exhibition—Exhibit of The Anglo-Canadian Supply Co.

to sink into which many a tired exhibition visitor was glad to sink.

Anglo-Canadian Supply Co.

The exhibit of "York Metal Polish" made by the Anglo-Canadian Supply Co., Toronto, takes the form of a booth decked in the royal colors of the Autumn, crimson and gold, with an artistic touch added by way of large vases of gorgeous sunflowers. In the background are ranged conventional stocks of York Metal Polish packages with wrappers of red, white and blue checked papers.

Standard Silver Co.

The highest point that has been attained by Canadian manufacturers of silverware was shown in a convincing manner in the display of the Standard Silver Co., of Toronto. President W. K. George has made it his ambition to produce a quality of silverware that would compare with the best imported into Canada. Many of those interested in this class of goods spent considerable time around the large case in which was shown the large variety of silver trophies for marksmen and sports of all kinds, the beautiful table silverware and the artistic silver ornaments of all kinds. In some instances surprise was expressed that such a high standard of ware should be produced in Canada, but the trade have long learned to look upon the productions of this firm as of the highest standard attainable. The fact that the firm are now exporters to all parts of the British Empire is proof sufficient of the quality of their product.

The Computing Scale Co.

Quiet and elegant is the exhibit of the Dayton Computing Scale Co. in the Manufacturers' Building. Rich green hangings and moquet carpets serve as a very effective background for the display of this firm's new weightless computing scales, cheese cutters, platform majestics, and near weight detectors, all of which are arranged on shelves at the

back or on tables of polished wood ranged carelessly over the floor space, extending from the rear to the front railing.

The machines exhibited include those employed in the grocery, confectionery, provision and butcher trades. The Computing Scale Co. makes in fact all kinds of scales for counter-weighing, and is justly proud of its record. They have been awarded diplomas and medals in the United States, Great Britain and numerous foreign countries for accuracy of weight, workmanship and beauty of finish. The Majestic scale, No. 40, possesses glass platform, locking poises, and full jewel Siberian agate bearings of patent ball bearing swivel base.

The company's provision and butcher scale has had a phenomenal sale on account of the accuracy and quickness with which it may be used. At the present time it is being extensively used in many of the largest Canadian stores, the total output being 150,000. The Templeton Cheese Knife is for retailing cheese and is so adjusted that a merchant may take a 60-lb. cheese and divide it into 60 one-pound cuts or fractions thereof as may be desired.

The company will be pleased to mail their fine new catalogue to any merchant interested in the money-weight system.



Canadian National Exhibition—Exhibit of Standard Silver Co.

Bennett Mfg. Co.

The Bennett Mfg. Co., of Pickering, Ont., had in the annex a display of hardware, grocery and drug store shelf boxes, also cabinets for various purposes. A new cabinet shown was one particularly designed for druggists and doctors, so arranged to carry the goods used by those in these professions to best advantage. Two cabinets which received much attention from the ladies were a kitchen cabinet containing a variety of boxes in various styles suitable for holding flour, meals, sugar, etc., and a spice cabinet containing fourteen small drawers specially adapted for holding spices. The merits of the Bennett shelf boxes need not be dwelt upon to readers of Hardware and Metal, as these boxes are now in use in practically every section of the Dominion, and are known to all hardware men. Another feature of the Bennett display was a combination ironing table, so designated that in addition to the regular work, shirtwaist sleeves can be ironed on it in a perfect manner. This firm desires to sell their goods to and through the hardware trade, and would appreciate any correspondence regarding their various lines.



Canadian National Exhibition—Exhibit of The Bennett Mfg. Co.

The Gurney Foundry Co.

In a view of the display made by the Gurney Foundry Co., given in last week's issue, only part of the exhibit was shown. As the part left out was probably the most unique portion of it, an engraving of the entire exhibit is given this week.

and reflected by the polished brass goods, made a sight worthy of note.

There were on exhibit in the brass goods department all kinds of polished brass goods. The valves were perhaps the chief goods in this line. There were there shown valves from the smallest to

whistles and injectors. In the plumbing goods department were shown all necessary bath-room furnishings, including shower baths, handsome mirrors, towel hangers, etc.

The electric light fixture display was the feature of the exhibit, and called



Canadian National Exhibition—Exhibit of The Gurney Foundry Co.

Brass Goods Exhibit.

For beauty and attractiveness the exhibit of the James Morrison Brass Mfg. Co., Limited, Toronto, could not be equalled in the Machinery Hall. The combination of different colored light coming from the numerous electroliers

the largest sizes, including globe valves, globe stop valves, angle valves, opposite valves, gate valves, common check valves and swing check valves. Steam gauges were also much in evidence. Other brass goods included were oil cups, gongs of different sizes and kinds, steam

forth many expressions of admiration from passersby.

Hardware and Metal was particularly desirous of having an illustration of this exhibit, but so far has been unable to secure a good photo, the plate taken proving unsatisfactory.

Henckel's

RETURNED
SEP 17 1904

Razors

RETURNED
SEP 17 1904

Nothing better made.

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F. W. LAMPLOUGH & CO., - MONTREAL

PIPE THAT IS PIPE.

THIS IS OUR BRAND

P-H



You Want It.

See that You Get It.



THIS IS OUR TAG.



TAKE NO OTHER.

BLACK AND GALVANIZED.

PAGE-HERSEY IRON AND TUBE CO., LIMITED, GUELPH, CANADA



“FAMOUS” OIL HEATER

An ideal heater for early Fall before lighting furnace or baseburner.

Can easily be carried from room to room.

So simple that a child can operate it.

Burns with a clear white flame; is perfectly odorless and throws an intense heat.

Costs about one cent per hour to run.

Is handsome to look at, and a perfect worker. Write for advertising matter.

The McClary Manufacturing Co.,

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,

Montreal.

The MacLean Publishing Co. Limited

Publishers of Trade Newspapers which circulate in the Provinces of British Columbia, North-West Territories, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, P.E. Island and Newfoundland.

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New Advertisements:

J. N. Warminton, Montreal.
Ontario Wire Fencing Co., Picton, Ont.

AN AXIOM IN ADVERTISING.

A FACT which all advertisers should bear in mind is that the chief result of good advertising cannot be seen at the moment. To be most effective it must be educative. Education is not a matter of impulse, of the decision of a moment: it is the teaching of weeks, even months or years, culminating in knowledge and conviction. Let a manufacturer convince the Canadian hardware trade of the merit of his goods and he can depend on the stability of his business.

BEARING FRUIT.

AT the time when the agitation over the deportation from Canada of the American engineers employed on the Grand Trunk Pacific was at its height, this paper took the ground that such a step on the part of the Canadian authorities would be resented by the United States, and that there would be a serious danger that Canadian engi-

neers employed in that country would suffer. It was also pointed out that as a result the graduates of Canadian engineering colleges would find it difficult to secure those opportunities for pursuing post graduate work at the great American universities which they enjoyed in the past.

What was then predicted is now actually happening, and we have news of two Canadian engineers losing their positions in the United States on account of the agitation in Canada. When we consider the number of Canadian engineers at work in the United States, and the importance of the positions held by them, this incident possesses a most grave import.

After what Canada has done, we cannot accuse the United States of any unfairness in thus protecting her native engineers. It is a logical and defensible step on her part. The only consolation is that the best-minded engineers on both sides of the line are regretting the misunderstanding which has arisen.

INDIGNANT BRITISH MERCHANTS

MUCH harm is being done in business circles in the Old Country, particularly amongst Birmingham exporters by the representative of a Canadian publication, who claims to have been delegated by the Canadian Government to interview manufacturers and exporters with a view to securing their advertisements in the trade paper with which he is connected, and which, he claims, is a Government subsidized trade organ.

A number of advertisers have had their eyes opened to the misrepresentation recently, and a short time ago a meeting was held in Birmingham, when 75 firms decided unanimously that their advertising contracts would be immediately cancelled. These 75 men represent only a portion of the total number who have been induced to place orders in this paper, and no doubt the remaining advertisers will soon follow in their wake. It seems almost incredible, but a large number of these firms jumped at the offer of a list of "the best Canadian buyers," personally prepared by the gentleman in question.

The list of buyers supplied to a firm of steel manufacturers was precisely the

same as that supplied to exporting jewelers. Incalculable injury has been done in this way, and many Birmingham houses now have peculiar and unjustifiable ideas of Canadian "honesty."

It is to be regretted that firms who placed their orders in the paper referred to did not make close and careful inquiry regarding the standing of the publication before entering into contract with it. We understand, however, that many allowed themselves to be rushed into signing the contract on the representation of the canvasser that his affairs would not permit him to call upon them again and another opportunity of obtaining space in this paper might not present itself.

THE CAMPAIGN FUND.

JUST before the country becomes embroiled in another general election is a good time to enter a protest against the methods employed by the party agents in raising campaign funds. Business men especially have been practically held up heretofore and compelled to pay large sums into the party treasury. Intimidation has been used with some, others have been threatened with the boycott, and there are many who have been unwilling givers merely because they dared not refuse.

There is a tendency at present to stand out against this principle of raising funds from among business men to carry on elections. It has been felt by many that the sum raised is in most cases far and above the necessities of the occasion, and that in assisting to raise a large campaign fund they are indirectly encouraging corrupt practices.

There is a certain amount of legitimate expense involved in conducting a campaign. The expenses of speakers must be paid for, and there are items relating to the rent and light of committee rooms and public halls. Added to these there are several other expenses, all perfectly legitimate. The whole, totalled up, does not net such a large sum as to be beyond the purse of any well-to-do candidate and his immediate circle of friends.

The public councils of the country require men of means and responsibility, and it would be just as well if only such men sought election as could afford to pay their own expenses. The rank and file of the party, and especially the business men in the party, would welcome and honor such candidates.

A DOMINION ASSOCIATION MOVEMENT.

PERHAPS the most important topic discussed at the recent meeting of the Canadian Wholesale Hardware Association, was that of the formation of a Dominion organization to include in its scope the whole of Canada. At the present time there are four distinct associations of the wholesale hardware trade of the country. In the Maritime Provinces there is a flourishing association which is, of course, limited in its scope and sphere of influence to the provinces down by the sea. The Canadian Wholesale Hardware Association, although the largest of the four, and calling itself by a name which would imply a national character, is limited in its membership to the Provinces of Ontario and Quebec. The hardware jobbers in the newer part of Canada are also organized, and there are two independent associations in Manitoba and British Columbia.

At the annual meeting held in Montreal last week, the members of the Canadian Wholesale Hardware Association discussed the project of forming a National Association. It was evident that the members, being fully convinced of the beneficial influence of their own association, were heartily in favor of the movement. Individual members of the other associations have at different times expressed themselves in favor of a national organization but, as was natural, they have left it to the largest body to take the initiative. Believing that the project would be favorably considered, the Canadian Wholesale Hardware Association appointed a committee to take up the matter and report. This committee will communicate with the other associations—it has probably done so already—and it is confidently believed that a ready response will be made to the advances of the Ontario-Quebec organization.

It is, however, no part of the plans of those interested in the new movement to interfere with the organization of the existing associations. It is not proposed that any one of the four existing associations should absorb the others, or that all should sink their identity in one national organization. The country is too large and the local interests of the various sections of the trade too

diverse for one association to be able to take the place of four. It is the part of wisdom to leave local questions to local associations.

But while all this is true, there is undoubtedly room for a new association national in its scope and formed upon the lines of the National Hardware Association of the United States. A number of Canadian hardware jobbers have attended the annual convention of the American wholesale hardware men, and nearly all are familiar by report with the workings of that national association. Although it is premature to discuss details of organization it is, of course, the intention to follow the American plan in most respects.

A Canadian National Association should make for greater stability in the hardware trade and should, therefore, be of advantage to all branches of the trade. There was a time when such an association might have been regarded with suspicion by the retailers, but, as was pointed out in last issue, time has shown that the members of these associations do not cease to be competitors, and the steadying influence which has been exerted on prices has been to the advantage of all. There has been no attempt by any of the associations to advance prices to unreasonable figures, and the retailers now regard them with favor.

There are many matters of common interest which it is unnecessary to enumerate here with which a national association could deal to much better advantage than any of the present organizations working independently. There is plenty of work for a national association to do on purely Canadian and national lines, and it is hoped that the new association, if formed, will inaugurate some new departures. Not the least of the benefits to be derived would be the stronger feeling of unity among the Canadian jobbers of hardware. The existing associations have done much to bring the jobbers together and make them understand each other. It is necessary, however, for the different sections to get together, and this end can be accomplished best by a Dominion association. Hardware and Metal wishes the new movement every success.

INFLUENCE OF ENGINEERS' VISIT

FOR the fuller elevation of Canada to national status, it is generally conceded that what she is most in need of to-day is proper development of her natural resources, most important among which are agricultural and mineral. In order to accomplish this the essential factors are the investment of capital and the occupation of the land by an intelligent people, and anything tending towards that end should be looked upon with favor and gratification by all her citizens. Just as the country continues to be sufficiently advertised abroad, and the people in older lands realize what we have to offer, so soon will the desired ends be attained.

While the visit of the electrical engineers to Canada last week may have no direct bearing on either, the result may go far towards the fulfilment of both, and whether the resultant effect be much or little, the appearance in our midst of so many men of eminence calls for more than a passing thought. Here were not only engineers, but capitalists and captains of industry, professors and scientific writers of world wide reputation. They are the princes of their profession, molders of minds and men of influence in their respective lands, who are for the most part young with boundless energy and enterprise. To have such men visit the country under such favorable auspices as was their short sojourn of last week, is one of the best advertisements the country could get.

They saw the busy metropolis of Canada, and noted the air of prosperity apparent. They viewed the numerous new works and manufacturing establishments and expressed admiration for the same. They were surprised, many of them, at the wonderful electrical development and the further possibilities, and at finding in Canada the greatest centre of electrical distribution in the world to-day. On all sides they were struck with the advantages the country affords, and expressed full confidence in the future of such a place. This visit can hardly fail to have an influence for good and act towards the better knowledge abroad of this land, the resources and possibilities of which are all too little known beyond her own borders.

CANADIAN TRADE WITH THE ANTIPODES.

MR. G. J. MILLER, representing Gollin & Co. Proprietary, Limited, of Australia and New Zealand has been in Canada and the United States during the past few weeks in the interest of his firm, who are one of the largest commission firms in the antipodes, having offices and warerooms in Melbourne, Sydney, Adelaide, Wellington, and sub-agents and representatives in every large town in Australia and New Zealand. The Gollin Co. are dealers in almost every line of merchandise, and realizing that there are great possibilities for Canadian manufactured products in Australia and New Zealand, have deputed their Mr. Miller to visit this country and form additional connections to those which they already possess.

Mr. Miller, who has visited Montreal and Toronto, is confident that our possibilities for trade in his part of the world are excellent, provided Canadians will only reach out after it. As every one knows, the United States have obtained a strong foothold there, but with the preferential tariff Canada has been given an enormous advantage over that country and Germany.

"Take," he said, "for example the one item of canned fish. The customs duty on these goods from United States is now 6c, and but 4c on Canadian goods. Already to my knowledge this has caused a large trade to be turned in the direction of Canada."

In his pocketbook Mr. Miller carried a list of articles on which the preference is given. Following is a list of goods, with the preference allowed on each, according to the new tariff law of New Zealand:

Article.	Rates on British Goods.	Rates on Foreign Goods.
Bicycles.....	20 per cent.	30 per cent.
Bicycle fittings.....	Free.	30 per cent.
Canvas.....	Free.	20 per cent.
Carriage timber, dressed, per 100 ft.....	4s.—97c.	6s.—\$1.46
Carriages and carts.....	20 per cent.	30 per cent.
Cement, per bbl.....	2s.—49c.	4s.—97c.
Cordage, except iron and steel.....	20 per cent.	30 per cent.
Cordage, iron and steel.....	Free.	20 per cent.
Fancy goods.....	20 per cent.	30 per cent.
Fish, preserved, per lb.....	2d.—4c.	3d.—6c.
Milk-testing glasses.....	5 per cent.	7½ per cent.
Infants' feeding bottles and seltzogenes.....	15 per cent.	22½ per cent.
Glass—crown, sheet and common window, per 100 sup. ft.....	2s.—49c.	3s.—73c.
Bent carriage glass, other than common window.....	20 per cent.	30 per cent.
Plate glass, bevelled or silv. Lamps and lanterns, and globes and chimneys for lamps.....	25 per cent.	37½ per cent.
Mirrors and a d. looking glasses, framed or unframed.....	20 per cent.	30 per cent.
Other plate glass and glass	25 per cent.	37½ per cent.

polished or colored.....	20 per cent.	30 per cent.
Hardware.....	20 per cent.	30 per cent.
Iron pipes and fittings, including main cocks.....	5 per cent.	7½ per cent.
Nails, per cwt.....	2s.—49c.	3s.—73c.
Paper hangings.....	15 per cent.	22½ per cent.
Paper wrappings, per cwt.....	5s.—\$1.22.	7s. 6d.—\$1.82.
Planos.....	20 per cent.	30 per cent.
Rails for railways and tramways.....	Free.	20 per cent.

The free list includes empty bottles of plain glass, not cut or ground except at the neck and stopper; jars with the mouths up to 3 inches in diameter; antique glass in sheets for ornamental window making; glass for making railway lanterns and hand lamps; lenses for magic lanterns, microscopes, and ship's side lights; and glass roofing tiles.

Gollin & Co. specialize the different branches of their trade, that is, an expert is placed in charge of each. This is naturally a great advantage to those who do business with them. They have in all a staff of 150 salesmen, who cover Australia and New Zealand from one end to the other.

Mr. Miller informed Hardware that his firm would be glad to supply information to any one writing in regard to trade matters in the antipodes.

"Canadians," he said, "do not realize that there is in Australia and New Zealand trade for them. Our consuming power is enormous, and it would pay them to reach out after our trade. I find that at present the Canadian manufacturers are all very busy supplying the home market, and have, consequently, very little desire to reach after the export trade, but I certainly think that they should make an effort to increase their business with our part of the world. New Zealand, as you know, gives a preference, and I feel certain that Australia will eventually do the same. As far as New Zealand is concerned, I believe the preference will be ultimately increased."

Mr. Miller left for the coast on September 13, en route home.

THE DUMPING CLAUSE.

We have received an anonymous letter, in which the writer attacks with some heat the "dumping clause" recently added to the tariff. We would be pleased to publish the same if the writer will furnish us with his name, which, if desired, will not be published.

Unless, however, the writer is willing to acknowledge authorship, the letter will not be published.

A NEED OF THE HOUR.

AN election is in progress at the University of Toronto. A new senate is to be chosen by the graduates of all the faculties. Owing to the federation of Trinity University with the University of Toronto, the senate will be increased in membership from twenty-six to thirty-one, exclusive of ex-officio members.

The functions of the senate are in the main academic, the members concerning themselves with the government of the university corporation, the prescribing of the curricula, etc. The management of the funds and the university property on the other hand are entrusted to a board of trustees.

It is accordingly natural to suppose that the senate would be largely composed of professors and professional men,—those directly interested in the work of the university,—and the board of trustees of men versed in the ways of the business world. This is the case with the senate and it is fairly true of the board of trustees. An infusion of more men of practical business training into both bodies would be highly beneficial.

At the approaching senate elections some forty graduates are up for election. Of these only a mere handful, some three or four, can be said to be business men. The remainder are lawyers, doctors, clergymen and professors. In Mr. W. T. White, of Toronto, we find, possibly, the only genuine business man in the list of candidates. Mr. White is a clever and successful financier and one who understands the needs of the business community in the way of higher commercial education. His election would be most beneficial.

What is needed is a representation of men like Mr. White, who will add to the more theoretical and visionary ideas of the academician, the practical everyday knowledge of the business man. In a university provincial in character and cosmopolitan in its aims, commercial interests should not be overlooked.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Sept. 15, 1904.

Hardware.

SEPTEMBER business has been very satisfactory to the wholesale hardware houses as the volume of business booked by their travelers is of large proportions. With the approach of Winter freight rates and the close of navigation, orders are coming in now for shipment while present rates obtain. The Northwest trade is reported particularly active, both shelf and heavy goods being in good demand from that quarter.

Price changes are not numerous. In another part of the paper, reference was made to a decline in "Olds" shovels. The new list will be found below. Prices on lawn mowers and harvest tools are confirmed for next season. The wire nail situation continues unsatisfactory as no agreement has been reached with regard to the maintenance of nominal prices.

Food Choppers—This is a line that is moving very actively at present. We quote, smallest size \$1.05 each net; medium family size \$1.20 each net; large family size \$1.35 each net.

Corn Cutters and Huskers—Also in seasonable demand. We quote as follows: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Harvest Tools—Present list and discounts are confirmed for next season.

Lawn Mowers—This season's prices as quoted during the Spring and Summer in these columns are confirmed for next year.

Agricultural Wrenches—In average demand. Prices continue, as follows: 6 in., \$2.85 a dozen 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Grindstones—We quote: 40 to 200 lbs., 2 in., and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in. thick and over, \$1.20; 11-12 in. thick and under 2 in., \$1.30.

Skates—Trade in this line is opening out well, good orders now being received by the jobbing houses. We quote as follows: Halifax pattern, plain, 38c a

pair; nickeled, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50 nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concaved \$1.60 a pair.

Lanterns—In active demand at former prices. We quote: Cold Blasts, \$7 a dozen; No. 0 Safety, \$4 a dozen.

Sleigh Bells—Moving actively this week, Northwest orders being particularly good. We quote: Brass team bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

Shovels—"Olds" shovels are cheaper, as was mentioned in last week's issue. The new list is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Washing Machines—We quote as follows: Round (three legs) \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Wringers—Discount is 33 1-3 per cent.

Currycombs—Discount is 37 1-2 per cent.

Heavy Screw Hooks and Hinges—Trade is of average volume at steady price. We quote: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Wire Hat and Coat Hooks—Price as before, 75 cents a gross for three inch.

Annealed Wire—There is a brisk demand at present, particularly in this province, as this wire is required for binding pressed hay. We quote: \$2.25 per 100 lbs.

Barb Wire—Considerable business is reported this week at former prices, which were: \$2.75 per 100 lb. f.o.b. Montreal, and \$2.50 f. o. b. Cleveland.

Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

Galvanized Wire—We quote the following prices which have recently been reduced: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 8 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—The reduced prices given last week are as follows: \$2.65 per hundred lb. keg for bright, and \$2.85 for galvanized; 25 to 50-lb. packages 25c extra.

Rivets and Burrs—In moderate demand at former list and discounts. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Screws—This line is in active demand at present. Sorting orders are numerous. Supplies are none too large. Discounts are: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—In very brisk demand at present. Prices and discounts are unchanged. Our quotations are as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Cut Nails—Still quoted at \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Wire Nails—The wire nail market continues in an unsatisfactory and uncertain condition. No agreement has been reached as to the maintenance of the nominal price of \$2.45 per keg and the market is still practically "open." It is impossible at present for this paper to quote with any approach to exactitude as in all transactions the price of wire nails is a matter of individual bargaining.

Pressed Spikes—The discount is 25 per cent., as before.

Horseshoes—An active Fall business is now in progress, large orders for shipment before the close of navigation now being received by jobbers and manufacturers. Our quotations are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—Business is now very active. We quote list price: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. Other brands 55 and 57 1-2 per cent off list.

Shot Guns and Rifles—More orders for rifles have been received this week than formerly, while shot guns continue as before; to be in good demand. Prices remain the same, and are to be had on application.

Ammunition—The Fall season has commenced with a good swing and many orders are being received. There is a shortage on some sizes of Canadian loaded shells, but this is being caught up with as fast as possible.

Shot—The demand is brisk. We quote the following prices: Standard, \$6.50 per hundred lbs.; chilled, \$7 per hundred lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Roofing Pitch—The demand for roofing pitch shows no sign of falling off.

The price remains as before \$1 per hundredweight.

Building Paper—We quote the following prices: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—Business is only fairly active. Our quotations are as follows: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement—There is a fairly active jobbing trade but business is scarcely up to expectations. We quote: English, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel, ex store; and American, \$2.15 to \$2.35, ex cars.

Coil Chain—The market is still weak and the demand is slight. We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-3 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

METALS.

The local metal market is fairly active. In pig iron there is not much activity. Bar iron is moving in large quantities and the demand is expected to continue brisk until the close of navigation. Some sizes are still reported scarce. The tin market is stiffening and a local advance will be noted below. Copper is firm and in good demand at former prices.

Pig Iron—The market is still very quiet and prices are nominally as before. We quote:

"Disc," No. 1.....	\$17.50 delivered Montreal
"Dom.," No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 " "
Glengarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.00 " "
" (special).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.90 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "

Bar Iron—An active business is reported and orders are now being received for large shipments before the close of navigation. Some sizes are still reported scarce. Our quotations are as follows: Merchants' bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

Tool Steel—This market is fairly active. Our quotations are as follows: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Merchant Steel—We quote as follows: Sleighshoe, \$1.77-12; tire, \$1.87 1-2; Spring, \$2.75; toe calk, \$2.37 1-2; machinery (iron finish), \$1.97 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.77 1-2; rivet, \$1.82 1-2.

Canada Plates—Conditions same as described last week. There is an active market with a slightly weaker tendency. We quote as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—The market continues weak, but business is fairly brisk. Fall import orders are being received. Our quotations are as follows: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—In brisk demand at present. A reduction will be noted in "Windmill Best." We quote: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95. In less than case lots, 25c extra.

Sheet Zinc—We quote case lots \$6.25 to \$6.50 and small quantities, \$6.50 to \$6.75.

Tin Plates—The market is firm, but there is not much activity. We quote: Cokes, \$3.75; charcoals, \$4.

Ingot Tin—Higher prices were predicted in these columns last issue. An advance of 1-2 cent has been made on

the local market. Quotations now are 30 1-2 to 31c.

Ingot Copper—No change in price is announced, but there is a strong upward tendency in this market. We quote: 13 1-2 to 13 3-4c, the former price being for large quantities only.

Pig Lead—The market is firm and active. We quote: \$3.25 to \$3.35.

Scrap Metal—No. 1 wrought is in better demand. Quotations are as follows: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

A SUGGESTION.

A correspondent styling himself "An Appreciative Well Wisher," writes Hardware and Metal to make a suggestion to the plumbing trade. He suggests a meeting of the master plumbers in order that they may arrive at some agreement as to prices charged for various classes of work. He urges that there should be a well established price for different jobs and that such an arrangement would be to the advantage of all concerned. "We would not hear so much then," he concludes, "from our customers of the varying prices charged in our trade."

ONTARIO MARKETS.

Office of **HARDWARE AND METAL**,
10 Front street east,
Toronto, Sept. 16, 1904.

Hardware.

BUSINESS now bears every indication of an approaching Winter.

Some lines, as window glass and putty, nails, cow chains, stable fixtures, etc., for immediate use in preparation for the colder days, horse blankets, sleigh bells and even skates and hockey sticks are started in move for later retail sale. Sporting goods continue in excellent demand. New prices on lawn mowers and spring hinges are now quoted, the quotations for 1905 having been set in the former line. As will be seen by the plumbing market reports on another page iron pipe prices have been reduced.

Lawn Mowers—The following quotations for 1905 have been issued by the manufacturers. Quotations to hand are: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25

to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discounts 50 per cent. with freight concessions in quantity shipments.

Sporting Goods—There is an excellent demand for all kinds of Fall sporting goods, particularly football goods and gymnasium supplies. The movement of Winter sporting goods, such as skates, hockey sundries, etc., is commencing.

Shot Guns and Rifles—Business in these lines continues longer into the season than usual.

Ammunition—A feature of the situation has been the effect of the dumping clause on some lines of United States ammunition. It is already evident that some of the manufacturers of this line in the United States will have to quit the Canadian market. In the meantime a fairly good trade is doing. We quote: American rim fire cartridges, 30 and 2 1-2 discount from list; American centre fire, 5 per cent. advance on list.

Harvest Tools—Trade is over in this line for the season. There are, however, a few lines of Fall goods still selling. The discount is 60 per cent. off.

Washing Machines—There is very fair demand for this line. We quote: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Woodenware—A very fair business is being done. Quotations are unchanged as follows: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2.00; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

Steel Track Door Hangers—There is little change in the situation. Business is very fair for this season.

Chain—An improvement is noted in the demand this week. We quote: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Barb Wire—The reduction in this line of 25 cents per 100 lbs., noted last week, holds. Trade is rather quiet.

Changed quotations are as follows: \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—A limited trade is reported. Our quotations are as follows: No. 5, \$3.45; Nos. 6, 7 and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4, Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Trade is very quiet. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—The situation on this market is unchanged. Cutting in prices still continues, and prices range according to the agreement made between retailer and wholesaler. Nominally prices remain unchanged at \$2.45 per keg f.o.b. Toronto; with car loads at \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are: "C" brands, 40 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—A very steady demand keeps up. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—A steady and brisk demand continues. Prices remain unchanged. We quote: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

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DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

Bolts and Nuts—There is a very fair trade being done. Prices are unchanged. We quote as follows: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—There is no change in quotations on this market. There is a fair amount of trade being done. We quote: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sash cord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—Fall trade has opened up with a strong demand for everything on this market. The prospect is for a record-breaking demand during the present season. All dealers are of the opinion that prices will remain unchanged until December. Our quotations are: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Firebrick—At present the demand for firebrick is inclined to be quiet; as this is the quietest part of the season for this material. Prices remain unchanged and are likely to do so for some time. We quote the following prices: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Cement—The demand for local trade has brightened up to a great extent, this is due to the fact that a percentage of the striking bricklayers and builders' laborers have returned to work. Outside trade has also brightened up during the week. Prices still remain the

IRON STEEL and METALS

Close prices to wholesale buyers only.

A. C. LESLIE & CO.

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MONTREAL.

The only reliable Pump for you to handle is

The McDougall Standard

It stands hard usage.

Lasts interminably.

Is made of iron and steel.

Outlasts several wooden pumps.

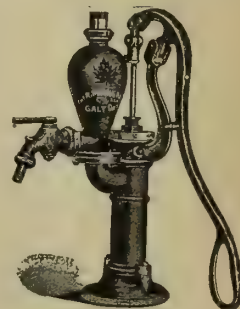
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R. McDougall Co.
Limited

Galt, Ont.



"ALPHA" HIGH SPEED STEEL Crucible Cast Steel for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.
SHEFFIELD, ENG.

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E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

same. Our quotations are as follows: Canadian Portland, \$1.70 to \$2; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex store; American Portland, \$1.80 to \$2.10 f.o.b. Toronto.

METALS.

A heavy consumption of metal continues in demand by manufacturers. In fact the metal importers are finding the volume of business considerably in excess of former years. Prices have been below the usual standard, but there is a strengthening of nearly all sheet metal quotations.

Pig Iron—The market continues steady a good trade in both domestic and imported iron being noted.

Middlesboro, f.o.b. Toronto	\$18 70
Hamilton, No. 1	\$17 50 to 18 00
" No. 2	17 00 to 17 20
" No. 1, Hamilton	16 25 to 16 55
Midland, No. 1	16 00 to 16 00
" No. 2	17 00 to 17 25
" No. 1 f.o.b. Midland	16 25 to 16 75
Radnor, f.o.b. furnaces	27 50
Londonderry, f.o.b. furnaces	16 50 to 17 00

Bar Iron—A good business is being done and prices are firmly maintained. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—The market continues to improve, the demand being excellent and prices strengthening. Prices remain unchanged. Quotations are from 30c to 31c.

Galvanized Sheets—This market has improved, and there is an active demand this week. We quote as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tin Plates—There is a very good demand, with prices unchanged. Stocks are light. We quote the following: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Clearing Sale

—OF—

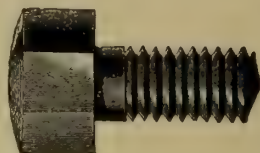
Fencings and Nettings.

Our remaining stock is FOR SALE at VERY LOW prices. Having disposed of our weaving machines, we are closing up the business of this company.

This is the LAST CHANCE to obtain a supply of the best nettings ever offered on the Canadian market.

We will be pleased to quote you prices, etc., on application.

THE ONTARIO WIRE FENCING CO., Limited, PICTON, ONT.



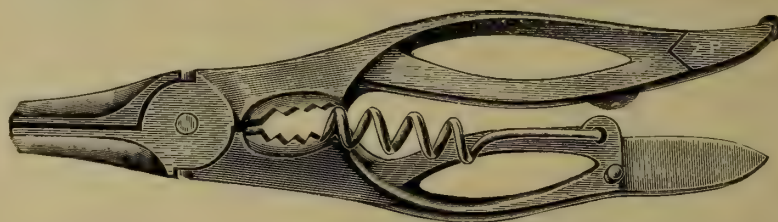
THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs Etc. Cold Punched Nuts of every variety of finish.

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LOOK! COMBINATION PLYER TOOL.



Glass Cutter, Knife Sharpener, Plyer, Can Opener, Nut Crack, Cork-screw, Ice Pick, Wrench, and adjustable Screw Driver.

Send for Glazier Section of the Green Book of Hardware Specialties.

Utica Drop Forge & Tool Co.

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"COMET" Brand Galvanized Sheets

All we ask is a fair trial for this brand as we know its merits will satisfy the most exacting. There is none better and the price is low.

W. GILBERTSON & CO., Limited, Makers,

Pontardawe, Wales.

ALEXANDER GIBB, Agent,

MONTREAL.

Copper—There is a very good demand at steady prices. We quote in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—This market is more active this week. Discounts are steady at 15 per cent.

Lead—Business has been very brisk, and a large amount has been done during the week. We quote: \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—There has been a falling off in demand during the week. Prices are from 53-4c to 6c per lb.

Solder—This market has picked up and is active. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wip-16 1-2 to 17c.

Antimony—There is a good demand.

Quotations are: 71-2 to 8c per lb.

Old Material—During the week under review old rubbers have made a slight improvement and an advance in prices is expected although at present there is no material change. The metal market is practically dead, lead has advanced 10c per cwt., the cause of this cannot be ascertained, and dealers attribute it more to a scare caused by the Stock Exchange. With the exception of lead prices remain the same. Quotations are: Heavy copper and wire 10 1-4c per lb.; light copper, 9 1-2c per lb.; heavy red brass 9 1-4c per lb.; heavy yellow brass, 7 to 7 1-2c lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.30 to \$2.50 per cwt.; scrap zinc, 3 1-4c per lb.; iron, No. 1 wrought, \$7 to \$9; No. 2 wrought, \$2; machinery cast scrap \$10 to \$12; stoveplate \$7 to \$9; malleable and steel,

\$4; old rubbers, \$4 1-2c per lb.; country mixed rags, 60c per 100 lbs.

PETROLEUM.

With a steady demand and a good supply this market continues to be the same. Prices are unchanged. Quotations by us on prices are as follows: Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 18 1-2c ex warehouse.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Vancouver, B.C., Sept. 9, 1904.

THE hardware trade is featureless, but active. Especially is it brisk in lines of builders' hardware, consequent upon the large extent of building operations in Vancouver city. This year the amount of permits will be larger than in any other previous year, and not only will the value be greater, but the class of residences and blocks will be of a higher grade. A year ago it was difficult to obtain a house in the residential portion of the city, but this year nearly 800 residences have been erected, so that there are now a few more than the demand. Still, new houses when not held too high are being taken up rapidly. In blocks, there have been some large ones erected, and some in course of erection. One of the largest to be begun this year, as soon as the plans are ready, is the new federal building, in which the post office will be located. This will cost between \$350,000 and \$400,000. Trade has been benefitted also by the good conditions setting in in the interior of the province. The lumbering industry there has been going ahead with the establishment of new mills, which has called for a lot of heavy machinery, considerable of which has been supplied by Canadian manufacturers, the Watrous Company being among the most successful. The interior centres of trade, such as Nelson, are very hopeful.

* * *

In connection with the lumber industry, it might be stated that the revenue from timber royalties during the months of July and August have been very high. This has been, too, in two months of fires and in a time when the industry has been depressed. The revenue was so large that it exceeded the amount of any other four months in the history of the province. The total revenue for the last fiscal year was

\$250,000, counted high, but it is expected that even this will be exceeded this fiscal year.

* * *

There are good outlooks for trade with countries bordering on the Pacific ocean. While there does not seem to be an overwhelming desire on the part of steamship companies to tender for the service to Mexico, as advertised by the Dominion Government, still there will be a company to operate on that route. Good business is anticipated after a start is made. Railway building is going on in that country, the party in power having a very progressive policy in this regard. Nearly all the material is imported, and Canada, with her vast resources, should be able to secure a share of the trade.

There are different opportunities in New Zealand, and one of the principal is the trade in lumber. Mr. C. A. Ulrich, who spent a number of years in that country, and who has now come to British Columbia to engage in mining enterprises, states there is a good lumber trade to be worked up, as the timber of this coast is just what is wanted in New Zealand. Timber is scarce in all the southern Pacific islands, and if care is taken, not sending lumber out haphazard, there is a market for large quantities.

Trade with foreign ports is now opening up again. War conditions prevented coasting vessels from operating along the Korean coast, but these hardships have now been ameliorated and considerable freight will be shipped to Kobe, where it will be transferred to the vessels doing the coast business.

* * *

Hydraulic mining in Cariboo has been better this year than since 1901. The clean-up there depends entirely upon the supply of water. Last year comparatively little snow fell, and the result was that the Consolidated Cariboo Co., operating at Bullion, the largest in the province, only got \$44,943. Last Winter the fall of snow was heavy, and in addition the company has spent considerable money in the construction of reservoirs and enlarging their watershed. The output this year will be \$126,000, the amount only being surpassed in two previous years, in 1900 and 1901, when it was \$350,000 and \$142,273. In those years there was plenty of water. Mining in Cariboo is being carried on quite extensively, and large amounts of money



THIS SHOWS THE
"HALITUS"

THE FINEST VENTILATOR OR CHIMNEY COWL MADE.

It gives a **positive upward draft** under all conditions—can't get out of order—and exhausts more cubic feet of air per minute than any other ventilator.
Made of Galvanized Steel or Sheet Copper.

The perfect simplicity and clever mechanical arrangement of the "HALITUS" will delight you, if you want a ventilator that really and perpetually ventilates.
Read all about them in our catalog.

METALLIC ROOFING CO.,
Limited,
Wholesale Manufacturers,
TORONTO, CANADA.

are being expended in getting down to the deep placers.

Mr. George A. Begy, of St. Catharines, and Col. William Hamilton Merritt, of Toronto, are in the city, having just returned from a trip through the Similkameen and Nicola Districts, in connection with the Nicola, Kamloops and Similkameen Coal & Railway Co. The company promoting this line of railway is composed entirely of Canadian people, principally contractors in St. Catharines and Toronto, Mr. H. E. Larkin, of the former city, being vice-president. Mr. Begy states that they are all ready to proceed with construction as soon as they have received definite and satisfactory assurances from the local Government of assistance. The line will open up some very valuable coal properties, and should be a factor in reducing the price of soft coal in Vancouver, where it now retails at \$6.50, although only 40 miles from the mines with water transportation.

* * *

The coal trade in British Columbia is to have a new feature this Winter. The Metallurgy Department of the Canadian Pacific Railway is developing the anthracite mines at Banff, and the coal will soon be on sale here. Mr. W. H. Aldridge, manager of this department, was in town during the first part of this week, having made the trip to the coast to arrange for selling agents. The coal is of good quality, about the same as the Pennsylvania product, and it is expected it will be delivered to house-

Merrick, Anderson & Co.

NORTHWEST DISTRIBUTORS

WINNIPEG.

"Hot Blast" Line for Coal.

For Soft, Hard or Lignite Coal, Coke, Etc.

Made by the D. Moore Company,
of Hamilton.



STRATHCONA HOT BLAST

KNOWN EVERYWHERE.

MANITOBA DEPOT

Merrick, Anderson & Co.
117 Bannatyne St. East, - Winnipeg.



STRATHCONA DOUBLE HEATER

No.	Diameter of Body.	Approximate Shipping Weight.
1115	15 inches.	134 pounds.
1118	18 "	174 "

holders at \$11 or \$12. This is comparatively cheap for anthracite. Last Winter a car or two was brought out from Pennsylvania, and it sold for \$17 and \$20. The Banfl coal is now being shipped into the Territories, where the fuel question has been a difficult one to deal with, because of the lack of wood in many parts.

...

Considerable general cargo from Liverpool will be discharged in Vancouver this week and next. The British ship Falklandbank, 1781 tons, docked yesterday at Evans, Coleman & Evans' wharf, and the Blue-funnel liner Machaon is expected to arrive to-night or to-morrow. The latter will have about 500 tons to put off here. These cargoes comprise cement, iron, salt, and such commodities. The Machaon will take a large consignment of salmon back to England from this port.

...

The pulp industry will go rapidly ahead on the British Columbia coast during the next few years. The buildings of the Oriental Power & Pulp Co. at Swanson Bay, on the mainland, are being steadily proceeded with, the company having got its title to the 80,000 odd acres of limits. The Pacific Coast Wood & Pulp Co., now being floated in London, will have its mills located at Powell River, about 80 miles from Vancouver. Officials of the Bella Coola Power & Pulp Co. have just returned from a season's cruising and surveying of the concession it has obtained in the vicinity of Bella Coola, and state that next Spring the preliminary work will be actively proceeded with. Those interested in this company are Seattle people. Seattle people also are establishing the mills at Quatsino, on the west coast of Vancouver Island. The papers have been signed for the construction of the mill, and work will be commenced before January next.

...

The Sylvester Feed Co., of Victoria, has just installed one of the largest rolled oat machines on the coast, having a capacity of two tons an hour.

Messrs. Evans, Coleman & Evans have completed the construction of one of the finest wharves on the continent. It is fitted with sections, moved by automatic appliances, to suit all classes of shipping. They do a large business in docking northern steamers, and steamers and ships from Liverpool and London.

Both the Canada Pipe Co. and the Pacific Coast Pipe Co., manufacturers of wooden pipe in Vancouver, are doing very good business since their opening last Spring.

THE PITTSBURG METAL MARKET.

From the Iron Trade Review, Sept. 16 1904.

Pig Iron—The iron market continues quiet, the largest sale of the week amounting to 4,000 tons, the order having been placed by the Westinghouse Electric and Mfg. Co. Of this amount 3,000 tons is for Cleveland delivery and went to a Cleveland furnace at a low price. The National Tube Co. is in the market for 2,500 tons of Southern forge, and will close before the end of the week. Lower prices on Southern iron are looked for with the increase in active furnace capacity. On Northern foundry iron \$12.60 can be readily done on No. 2, although as high as \$12.85 is asked. On forge \$11.85 Pittsburg can be readily done, while Bessemer is somewhat weaker, and it is probable that \$11.75 at the furnace could be shaded for early delivery. On the whole the Northern iron situation is weaker, but prices cannot go much lower, as there is no profit at present prices to the furnace operators. We revise quotations as follows:

Bessemer, Valley	\$11 75 to	\$11 90
Bessemer, Pittsburg	12 60 to	12 75
No. 1 Foundry	13 00 to	13 25
No. 2 Foundry	12 60 to	12 85
Gray forge, Pittsburg .....	.... to	11 85
Chilled basic, Valley	11 65 to	11 75
Chilled basic, Pittsburg	12 50 to	12 60

Steel—A meeting of the billet association will be held in this city on Thursday, but the extent of the reduction cannot be forecast. While it is reported that \$4 has been practically decided upon, there are producers who will not favor a reduction below \$20. The spread between billets and sheets and tin bars is to be increased. Awaiting the adjustment of this matter, there is practically no buying, and the sales made are on the basis of \$20, Pittsburg. Agreed prices are as follows: Bessemer and open hearth billets, 4x4 inches, and slabs up to and including 0.25 carbon, \$23 Pittsburg, Wheeling, Valley, Johnstown, Ashland, Ky., Irontown, O., and Lorain, O.; 0.26 and including 0.60 carbon \$1 advance; and 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 3 7/8 inches and sheets and tin bars are \$1 per ton extra. Bessemer and open-hearth rods are quoted at \$25.50 to \$27.

Rails and Track Materials—The Edgar Thomson and Ohio rail mills of the Carnegie Steel Co. are operating at their usual capacity on rails for Canadian delivery, which must be delivered on Canadian soil before November 30, to avoid the payment of the \$7 duty. On light rails low prices continue to be

made. We make the following quotations: Standard sections, 50 pounds and over, in lots of 500 tons and over, \$28; car lots and less than 500 tons, \$30; less than car lots \$32; light rails, 16 to 40 pounds, \$18 to \$20. Track material, spikes, \$1.55c to \$1.60c.

Bars—A meeting of the steel bar association will be held in this city following the meeting of the billet association which is to be held on Thursday. The extent of the reduction is in doubt, but consumers having contracts in force on which quotations are guaranteed will be benefitted no matter what the reduction, and all the contracts made this year are on that basis. While bars are quoted at 1.35c, all of the large contracts have been closed on the basis of 1.30c, and should there be a reduction of \$2 a ton from the present ruling price it will really only amount to a reduction of \$1 on more than 90 per cent. of the tonnage. While bar iron is held on the basis of 1.25c to 1.30c the bi-monthly settlement made at Youngstown this week on the basis of 1.20c indicates that for some time the mills in that district have been selling on that basis instead of 1.25c. We make the following quotations: Bar iron, 1.25c to 1.30c Pittsburg for local delivery. Hoops are held at 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, zees and tees, Bessemer under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 of a size, not less than 1,000 pounds, 10 cents advance; less than 1,000 pounds of a size, 30 cents advance.

Wire and Wire Nails—The seasonable demand for wire nails and wire products is almost up to normal, and in this vicinity no concessions are being made. Owing to the withdrawal of the largest mill producing cut nails the cut nail association is of little power in the trade. A meeting of the association was held last week and prices are now on the basis of \$1.60 for both iron and steel nails.

Pipes and Tubes—The LaBelle Iron Works this week received an order from the Virginia Oil and Gas Co. for 15 miles of line pipe, being the largest order for this material closed this month. Some shading is reported on merchant pipe, but it is not very deep owing to the low list now in effect.

Coke—Within two weeks the number

of idle ovens in the upper and lower Connellsville regions has been reduced one-half, fully 5,000 ovens having been fired. Ninety per cent. of this capacity has been fired by the H. C. Frick Coke Co., indicating that the demand for coke outside of the Steel Corporation is not improving very rapidly. Prices also continue low, operators being unable to secure more than \$1.40 for furnace coke, while foundry is selling on the basis of \$1.85 to \$2. On the other hand, the H. C. Frick Co. is receiving much better prices from the constituent companies of the United States Steel Corporation. In June the inter-company price was \$1.70, July, \$1.60, and August, \$1.55. These are excellent prices as compared with those prevailing in the open market.

LONDON METAL MARKET.

From The Metal Market Report, Sept. 16, 1904.

Pig Iron—Scotch warrants Glasgow closed at 50s 3d, and Middleboro No. 3 foundry closed at 43s 3d, no change from last week.

Tin—Spot tin opened firm at £126 7s 6d, futures £127, and after sales of 150 tons of spot and 130 tons of futures closed easy at £126 2s 6d for spot and £126 15s for futures, being an advance of 5s for spot and 10s for futures.

Copper—Spot opened quiet at £57 7s 6d, futures £57 8s 9d, and after sales of 75 tons of spot and 125 tons of futures, closed easy at £57 5s for spot and £57 7s 6d for futures, making price as compared with last week unchanged on spot and 3s 6d higher on futures.

Lead—The market closed at £11 16s 3d, an advance of 3s 3d over last week.

Silver—The market closed at £22 10s, a reduction of 2s 6d from a week ago.

WORK ON NEW RAILWAY.

THE first actual work on the James Bay Railway was begun yesterday, when about one hundred and fifty men and forty teams were started on track-building operations between Richmond Hill and Aurora. Ground was broken just west of Wilcox Lake, on the first side road north of Bond Lake. The road-building gang were on Tuesday sent up to Vandorf, but the engineers were not ready for them, and they were sent back to begin work at Wilcox Lake. There was no ceremony in connection with the opening of the work on the Toronto section. The Northern Construction Co. is building this part of the road.

Mr. W. H. Moore, of the James Bay Railway Co., last night said that he could say nothing for publication as to the reported absorption of the Aurora and Schomberg line by the James Bay Railway.

PERSONAL MENTION.

Mr. Andrew Jeffrey, formerly with Lewis Bros. & Co., now deputy collector of inland revenue at Stratford, Ont., was a visitor in Toronto on Saturday last.

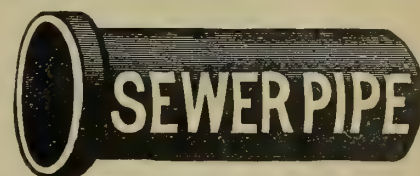
Mr. George N. Des Rochers, of the Canada Hardware Co., Montreal, is enjoying a visit to the St. Louis Exposition, Chicago, Detroit, Niagara and Toronto.

Mr. C. Dolph, of the Metal Shingle & Siding Co., Preston, Ont., was a visitor in Toronto last week.

Mr. E. L. Dyer, manager of the sales department of the Page Wire Fence Co., Limited, Walkerville, Ont., returned to Walkerville this week after a most successful fortnight's business in Toronto.

.. FULL STOCK ..

Salt Glazed Vitrified



Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT.

TORONTO, ONT.

ST. JOHNS, QUE.

THIS
IS THE
Downward
Light
Lamp.



What is Useful
Light? The light
which is thrown
on the table, desk,
counter, machine,
book, or object,
where it is re-
quired.

We can easily
prove to you that
the **DOWNWARD
TIPLESS LAMP** is the most economical lamp
manufactured to-day. Write for particulars and
prices. For sale by all prominent dealers.

MANUFACTURED BY

ONTARIO LANTERN & LAMP CO., Limited

HAMILTON, ONT.

WALTER GROSE, Sole Selling Agent, Montreal

We also make the **SHELBY** and **BRILLIANT**
Edison Type Lamps.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost **must** accompany all advertisements. **In no case** can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion.	1 year.....	\$30 00
" " " "	6 months.....	17 00
" " " "	3 months.....	10 00
50 " " " "	1 year.....	17 00
" " " "	6 months.....	10 00
25 " " " "	1 year.....	10 00

SITUATIONS VACANT.

CLERK WANTED—General hand; young man with about four years' experience; with good references, state age and wages. T. Wallace & Sons, North Bay. f

HARDWARE CLERK—Energetic, first-class salesman for stoves and hardware; give references, age and experience. Apply to W. H. Richardson, Essex, Ont. (38)

WANTED—A reliable, experienced clerk for general store; must be a good salesman and stockkeeper; send references, stating salary expected. A. Ruggle & Sons, Floradale, Ont. f

MECHANICS WANTED.

BLACKSMITH—At once; one who can do general work and horseshoeing; married man preferred; state age and wages. Magee & Brown, Box 83, Bracebridge. f

GENERAL BLACKSMITH—Three years' or more experience. Apply J. F. Husband, Eden Mills P.O. f

SITUATIONS WANTED.

BY ENGLISHMAN—7 years' experience in first-class hardware firm in old country. Apply Box 172, HARDWARE AND METAL, Toronto. (38)

HARDWARE SALESMAN (23) wants situation in city; British and colonial references. G. W. Harper, Commercial Hotel, Jarvis street, Toronto. (38)

STEADY MAN—Age 25—Wants situation as clerk; state wages. Allen, 62 Seaton Street, Toronto. f

YOUNG MAN wants to learn hardware; references as to character and ability. Apply Box 173, HARDWARE AND METAL, Toronto. (35)

BUSINESS CHANCES.

A VERY desirable and successful business; stock about \$7,000, principally hardware; situated in the busiest centre of the town; largely cash trade and in splendid running order; the premises can be bought or rented; established since 1837; proprietor retiring only reason for selling. For further particulars address F. J. Wilson & Co., Buckingham, Que. (41)

MACHINE SHOP FOR SALE—Well equipped for repairing. Box 71, Ingersoll.

WALL PAPER.

Color Effects.

THE study of color effects is the basic study of the decorator's art. There is no need to be afraid of color. In fact, the decorator who will use color freely, firmly and liberally, and will induce his customers to have colors used according to his tastes, will find the homes he decorates improved 100 per cent.

Formerly the subdued wall papers gave no character to the walls, and did not help out the other home decorations. Now the whole room is enriched, the furniture is given a positive setting, and there is a reflection from the wall paper that gives the one essential of all the decorations of a room positive character.

It is sometimes a little difficult to convince a customer that bold colors are the proper ones to use. Many women think that washed-out comparatively insipid designs are more refined. However, it has been demonstrated that even green and blue, which often will hardly go together, can be made to harmonize beautifully. Colors seemingly in glaring contrast are brought together, and we find harmony. Put together properly, they are rich and in no wise obtrusive. In such cases we will generally find that somehow or other a little yellow is worked in. Yellow seems to be the color that links all others.

Of course we are not in favor of any glaring incongruous effects in color. Bold colors, to be artistic, must be used with particular care to be in harmony. The tendency toward such forms of richer harmony is growing stronger and the demand for bold designs and strong, striking colors will be even greater in the future than now.—Painter and Decorator.



Upper Third Treatment, manufactured by Stauntons Limited, Toronto.



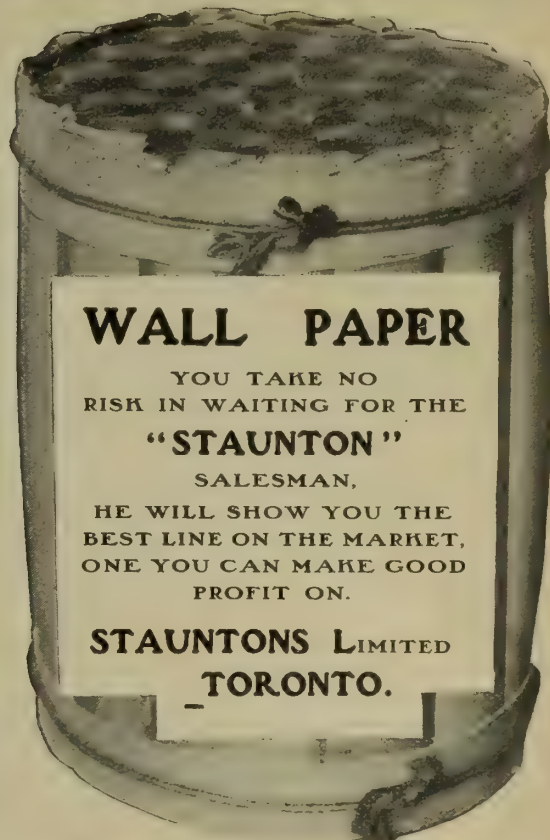
GILLETT'S LYE

—IS GOOD FOR—

Photographers'
and **Machinists'** uses,
Foundrymen, Bolt
and **Nut Makers.**

A large market for Gillett's Lye is thus provided.

E. W. GILLETT COMPANY LIMITED
TORONTO



WALL PAPER

YOU TAKE NO
RISK IN WAITING FOR THE

"STAUNTON"

SALESMAN,
HE WILL SHOW YOU THE
BEST LINE ON THE MARKET,
ONE YOU CAN MAKE GOOD
PROFIT ON.

STAUNTONS LIMITED
TORONTO.



IF YOU DO NOT HANDLE

BOECKH'S BAMBOO HANDLED BROOMS

give them a trial and find out for yourself the advantage of supplying your customers with this superior working and durable broom. Unlike the ordinary wood-handle broom, they are heaviest at the brush end where the weight is required. This, combined with the "common-sense" handle, has made them extremely popular with the best housekeepers all over Canada.

THEY ARE READY SELLERS AT ALL SEASONS.

OPERATING:

Boeckh's Toronto Factories.
Bryan's London Factories.
Cane's Newmarket Factories.

United Factories, Limited,
Head Office: **TORONTO.**

BRANCHES:

MONTREAL
LONDON

"BOECKH & BRYAN PAINTERS' BRUSHES ARE THE BEST MADE."

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,

232 McGill Street.

Montreal, Sept. 15, 1904.

BUSINESS this week is reported quiet. As is usual in September, the travelers find a number of merchants absent attending country fairs or otherwise seeking relaxation and these things all have their effect on the volume of business booked. Prices are remarkably steady, and there is a stiffening in turpentine. It is thought by the manufacturers that the high price of wheat should, by the end of the month, give a stronger undertone to the demand for painting stock of every class. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1, 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 83 1-3c per gallon; two to four barrels, 82 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs. The above prices are net 30 days; for longer terms prices are higher. The market is firm.

Linseed Oil—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure White, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,

10 Front street east.

Toronto, Sept. 16, 1904

After a quietness of a fortnight during Exhibition, paint and oil business has improved materially during the past week. There is no change in prices though there is an upward tendency in linseed oil, due to higher values in Great Britain.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb.,

\$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls.,

HOLLYWOOD—and others.

Unlike the others,

Hollywood Paste, Ready-Mixed and Floor Paint

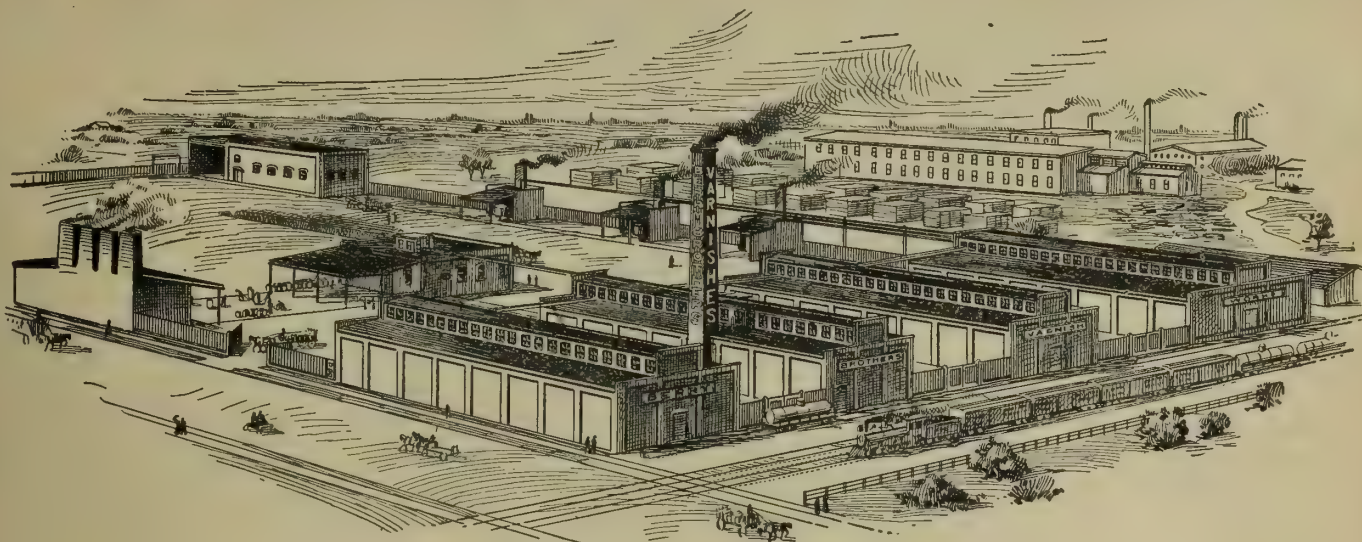
wear on the job, not off it.

Secure agency for 1905.

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED,



IT IS NEARLY
HALF A CENTURY

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

Berry Brothers
LIMITED

WALKERVILLE, ONT.



8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

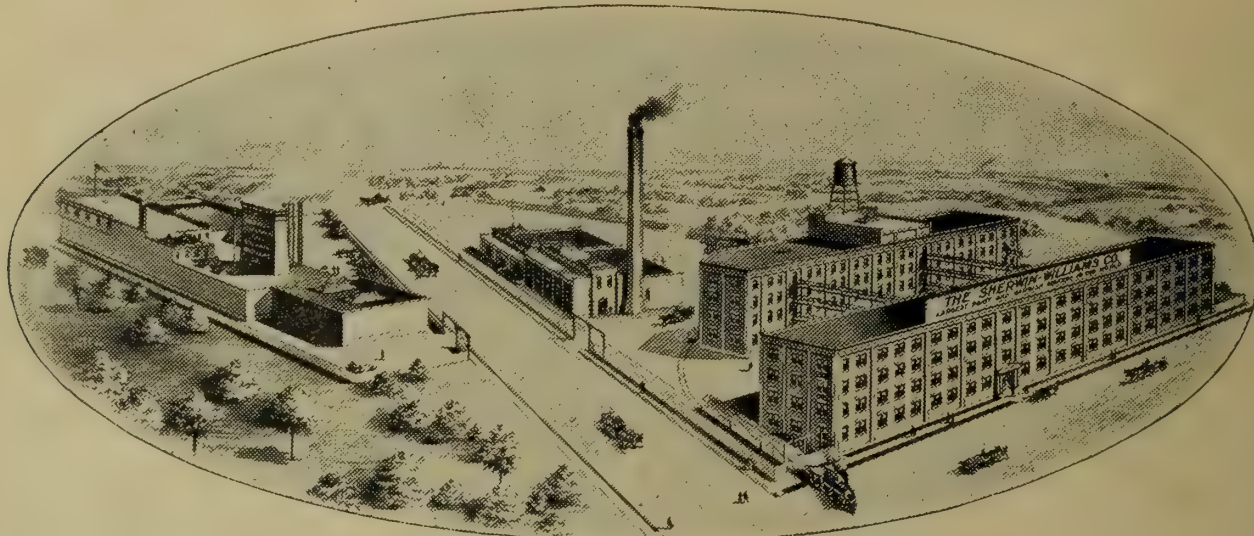
Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

mond star or double thick. First break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.90; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

A good deal of business is reported by local glass dealers. Prices continue firm but there is no indication of higher prices in the immediate future.

the latter is sooner got ready for the market. Most of the boiled oil now to be bought is not as satisfactory in use as were the older brands, and probably part of this unsatisfactory character may be ascribed to the too free use of the soluble driers and the too short time that the oil is treated, which does not take away that rawness of character so completely as it is desirable. A good well boiled linseed oil should not possess any rawness, and further the short treatment does not give it the right physical degree of viscosity it ought also to have. The impression is certainly that the boiled oil produced by the older processes had a higher viscosity than much of the boiled oil now produced. Then the tendency is rather to use too much drier, which is bad for the life of the paint, although it makes the paint dry quicker."



New Works of The Sherwin-Williams Co., Montreal.

Window Glass.

MONTREAL.

The local glass market continues in an uncertain and unsatisfactory condition. The situation in Belgium as described in these columns last week remains unchanged and as that country is one of the main sources of Canadian supply this market is necessarily affected. In the meantime, however, there is some cutting locally which is not expected to continue as all the indications point to an advance in prices this Fall. Our quotations are, as before: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount on 50 feet is 20 per cent, and on 100 feet 33 1-3 per cent. There has been no change in prices for dia-

We quote: Star first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount 15 to 20 per cent. These prices are shaded on large and well assorted specifications.

Linseed Oil in England.

THE Oils, Colors and Drysalteries Journal, of England, just to hand, quotes flaxseed as having advanced in Hull from 1s to 1s 6d per quarter during the month, and also that the oil and oil cakes is rising in sympathy with this. There is also a criticism on boiled oil which reads as follows:

"There seems to be a tendency of late on the part of the oil boilers to discard the old system of boiling the oil and the use of the oldfashioned lead and manganese driers, for the more modern and soluble resins, and linoleates of lead and manganese, chiefly because they are easier to get into the oil and further

Sherwin-Williams Factory.

In last issue, extended reference was made to the formal opening of the new Sherwin-Williams works in Montreal. In this issue, Hardware and Metal takes pleasure in presenting to its readers an illustration of the big new factory. The cut was received too late for publication last week.

Shellac and Turpentine Substitutes.

A SPECIAL contributor to the Oil and Colourman's Journal, writing of his investigations on the above important subject, says:

The two very important natural products shellac and turpentine have during the past two years very much increased in price, this being nearly doubled in both cases. This increase in price is a matter of moment to the users, who find the articles, paints, varnishes, etc., which they make from

If You Buy

Varnishes	Paints
Japans	Colors
Lacquers	Glues
Stains	Bronzes
Fillers	Chamois
	Sponges

WRITE TO

R. C. JAMIESON & CO.
LIMITED
MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.



The Wearing of the Green

depends upon the kind of green used.

Wise painters, looking for brilliancy, covering power, economy and longest wear, prefer

LUCAS Imperial French Green

Shrewd dealers always keep it in stock, knowing "the painter who knows," will come back again.

Send for particulars

JOHN LUCAS & CO.
PHILADELPHIA
NEW YORK CHICAGO
McArthur, Corneille & Co., Montreal.

PENNOLINE

W. W. AMERICAN OIL has no equal.

Write for prices to any of the following branches:

Toronto, Ont.	-	-	St. John, N.B.
Hamilton, Ont.	-	-	Halifax, N.S.
Winnipeg, Man.	-	-	Montreal, Que.
Vancouver, B.C.	-	-	Petrolea, Ont.

CANADIAN OIL COMPANY, Limited

T. H. HAMILTON, General Manager

Cor. Front and Scott Sts., TORONTO

*"There is a tide in the affairs
of man which taken at the
flood leads on to fortune."*

—SHAKESPEARE.

WHEREVER

IS

DISPLAYED

THE

MAGIC

WORDS

"WE

"SELL

"THE

"Canada

"Paint

"Company's

"PAINT"

THE

STORE

IS

STAMPED

AS

THE

MOST

SUCCESSFUL

IN

TOWN.

them more costly; and, further, owing to the way they sell to the public they find they cannot get an increased price, and so their profits have dwindled down rather considerably. Attention has therefore been directed to the question of finding some other materials which shall take their place, and in some cases this has been done with success. Indirectly the need of substitutes has resulted in more attention being paid to these latter and to methods of dealing with them to improve their quality. For instance, there is rosin spirit. This has been known and used for many years for various purposes, but as long as turpentine was cheap it was scarcely worth while paying much attention to it, but now when turpentine is dear the possibilities of improving it and so being able to use it for paint and varnish making in the place of turpentine has not been lost sight of by the manufacturers, and new methods of dealing with it have been devised, with the result that new qualities of rosin spirit are on the market which are excellent substitutes for turpentine, and may be used in making paints and varnishes with satisfactory results.

A good rosin spirit for the purpose just named should be quite free from any traces of oil, which was not the case with many of the grades formerly made. Then, again, as possible substitutes, attention is being paid to certain petroleum and paraffin products that in grade come between the naphthas or benzolines, which are too light, and the kerosenes or burning oils which are too heavy. These particular grades have a present no standard name by which they are known; in gravity they are heavier than naphthas, have a good flash much above that of the naphthas which makes them comparatively safe to use. They are not quite perfect substitutes for turpentine, still they are fairly good. Their chief fault is a tendency to work oily, although the best prepared grades are free from this defect. Shellac substitutes are only just beginning to be put on the market, and time only will tell whether they are good, bad, or indifferent, or will answer for all the purposes to which shellac is now put — the manufacture of cabinet varnishes and polishes; preparations of sealing waxes, floor waxes, cements, etc.

LAWN MOWERS.

"In times of peace prepare for war" has long meant to the hardware trade "In the Winter prepare for the Summer's business." The Taylor-Forbes Co., Limited, Guelph, Ont., are going this one better by already giving out some of their plans for next Summer's lawn mower trade. The firm have issued prices for lawn mowers for 1905. They

will also put on the market a ball-bearing lawn mower which is of their own invention, having been gotten out early in the year to give it a thorough trial and they have combined in it every good feature that could be utilized to make easy running and also easy to adjust. One of the troubles with ball-bearing machines now on the market is that they are very badly fitted, the grass getting inside the bearings and the cones and cups are usually so fitted that they will not allow for adjustment or the taking up of the end thrust caused by wearing of the blades. Taylor-Forbes Co., in their new ball-bearing machine, called the "Empress," overcome all these difficulties and their machine will be guaranteed to do all that is claimed for it, and it will not be nearly so high in price as the machines that are imported from the United States. The firm say this will be the first ball-bearing machine ever made in Canada by any one. Taylor-Forbes Co. deserve credit for their enterprise in going to the enormous expense that is necessary to produce this type of machine. The hardware trade generally will do well to get their figures and illustrated catalogue before buying outside.

YANKEE DRILL NO. 44.

NORTH BROS. MFG. CO., Philadelphia, Pa., have ready for the trade a new automatic drill, called the "Yankee" No. 44. The trouble with automatic drills has been that



no one strength of spring in these tools would be satisfactory in both soft and hard woods, or for the large and small drills furnished with the tool. The best that could be done was to use a spring of average strength. In this new drill No. 44 this difficulty has been overcome by a device to adjust the tension of spring, making it weaker or stronger according to requirements of character of wood to be drilled and size of drill to be used.

The cap on top of drill has a screw attached to it, by revolving which the spring is made longer or shorter, thereby making the spring weaker or stronger. The spring is held at desired tension by a small bolt or lock which engages in the cap and is operated by a small knob on side of handle. Further information will be supplied by the North Bros. Mfg. Co. on request.



SOMETIMES YOU JUMP RIGHT OVER

the very firm you ought to be doing business with. When it comes to PAINTS, OILS, VARNISHES and such things, we feel that we ought to have every dealer's business — just because of the values we give and the quality of our product.

WHITE LEAD IN OIL.

The brands we sell cannot be excelled, and are rarely, if ever, equalled. **Monarch Strictly Pure White Lead** is absolutely perfect and will stand any chemical test. We guarantee it to be perfectly pure. **Decorators' Pure White Lead** is next in quality. **Essex Genuine** is next. Put up in 25-lb. irons, 50-lb. irons, and 100, 250 and 500-lb. kegs. Closest market prices.

STANDARD PAINT & VARNISH CO., Limited, Windsor, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

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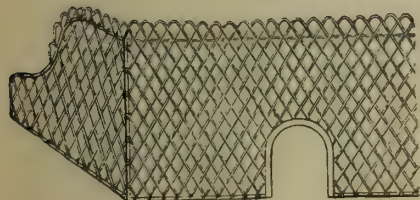
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TO TRY
SOLARINE

SHALL WE SEND YOU
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MONEY BACK

"SOLARINE" POLISHES

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We make all styles of

**WIRE AND METAL RAILINGS,
WINDOW GUARDS, ETC.**

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RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES

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GLUES AGAIN

Our IMITATION FRENCH MEDAL
GLUES are of such high class

and are so suitable for Export that we would like to quote you. Export trade in this line is growing rapidly, and we pack in casks or cases as preferred. Quality unrivalled.

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CORNWALL ROAD STAMFORD STREET.

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Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works
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**Once Used
Always Used.**

This is not theory; it is a fact about "ISLAND CITY" Paints. If you can make a first sale, the second and third will follow as a matter of course. You need these paints in your business.

P. D. DODS & CO., Montreal, Toronto, Vancouver

STOVES AND TINWARE

WHAT A SET OF HEATING SPECIFICATIONS SHOULD INCLUDE.

IT is most important to the interests of the contractor as well as to the interests of the builder that any contract for heating work should state clearly and in unmistakable terms the essential features of material and workmanship involved in the contract. An incalculable amount of controversy would be saved if heating contractors would insist that the specifications which they are asked to sign shall really specify every important item with relation to the work. The ideal specification has yet to be written, while the specification drawn up by the average architect is very far from being an actual description of the system when completed. Many important details are neglected with the result that neither builder nor contractor is afforded proper protection. The contractor finds that many extras are required, for which, of course, he has to present a bill which is invariably disputed.

In the following paragraphs we print by courtesy of the National Builder, the ideas of L. Allen as to what a heating specification should cover. To some it may seem to deal too much with details. If this be so it is assuredly an error in the right direction.

A complete plan of specifications should at least comprise the following points, everything described in the specification being, as far as practicable, indicated on the plans, to wit:

Kind of boiler and its capacity. If a boiler be intended for power as well as heating, the specifications should state dimensions of the boiler, including diameter and length of shell, number and length of tubes, diameter of tubes, height and diameter and thickness of steam dome and dome head, thickness of shell, thickness of heads, quality of iron or steel to be used in dome, boiler, boiler-heads and dome-heads, kind and quality of tubes, list of all castings to go with boiler, size of furnace, space between grate bars, and a full list of boiler trimmings and their sizes, including gauges, gauge-cocks, safety valve, blow-off valve, feed valve and check valve, and

the pressure to which the boiler is to be tested.

The specifications should also describe in detail the manner in which the boiler is to be set, and the position of the boiler should be shown on the plans, together with the space occupied by it when set.

The quality of all the pipes and fittings should also be included in the specifications, and, if any preference exist for those of any particular manufacturer, goods of his make should be specified.

The sizes of steam mains, return-mains, reliefs, connection of mains to boiler, steam risers, return risers, connection of risers to mains and connections of risers to radiators should all be described in the specification, and also their positions and diameters should be shown on the plans. The return mains running nearly always below and parallel to the steam main may be omitted if the diameter of the same relatively to the steam main in all parts be distinctly specified.

The total heating surface, both inclusive and exclusive of mains and risers should be stated in the specification and its distribution fully shown on the plans. The specification should name the kind of radiators to be used and their finish, and the plans should show the precise location, length, breadth, height, and the number of square feet of heating surface in each.

The total amount of heating surface specified to be put into the building should be ascertained by careful computation based upon the character of the materials of which the building is constructed, the thickness of walls, amount of glass in the building, its situation and exposure. This done, the distribution of the surface should be determined from considerations of greater or less exposure of various parts of the building, the uses to which different rooms are to be put, etc. No rule of thumb method will insure highest success in this part of the work, nor indeed in any other part.

The kind, number and position of all valves to be used in steam and return mains, or at the bottom of steam risers, should be distinctly described and shown in the specifications and plans and the kinds of radiator valves and air valves, their sizes and finish, and if automatic air valves with drip pipes are used, the latter and their connection with sewer pipes should also be indicated on the plan and described in the specification.

If indirect heating be employed there will also be cold-air boxes and hot-air flues to be specified and described, and the kind, sizes and location of these as well as the quality of the material to be used in them and their finish should all be distinctly stated, and, as far as practicable, indicated on the plans.

In short, the specification and the plans should be counterparts which together form a complete and unambiguous whole, including the required guarantee.

A specification should specify, not generalize in terms the value of which can in any manner become a subject of dispute. Such words as "suitable," "proper," "sufficient," "ample," and the like, figure far too conspicuously in most of the specifications prepared by the common run of steam heaters. "The boiler is to be suitably set in brick work"; "the cold-air boxes are to be made of wood or galvanized iron of suitable quality"; "the pipes in the cellar are to be properly covered with insulating material," etc.

I repeat that it is the proper function of a specification to specify what is the suitable brick setting, what is the proper material for cold-air boxes, what is the proper insulating material for the pipe, if any be needed, and how it should be applied, and so on to the end of the subject.

Oil Heaters.

WITH the approach of cool Autumn weather, the progressive stove and hardware dealer should not neglect his stock of oil heaters. It is true that this is the season during which he is concentrating his energies on the Fall trade in stoves and furnaces and the profits from the sale of a single

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

Don't Forget the Name. . .
NEWMAN'S INVINCIBLE FLOOR SPRINGS
 Strong, Quick, Reliable, Effective.
 Will close a door against any pressure of wind. Far ahead of ordinary door springs, pneumatic or otherwise. Ask your wholesaler.
W. NEWMAN & SONS, Birmingham.

WORK AND PRICES RIGHT
GALVANIZING ONT. WIND
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When placing your order for Lanterns, ask for **WRIGHT'S Cold Blast Lantern**, which is the only genuine Cold Blast Lantern made. They are the best, and we will guarantee prices against all other makers for this season and for next.

E. T. Wright & Co., Manufacturers, Hamilton and Montreal.

Buy the Best.



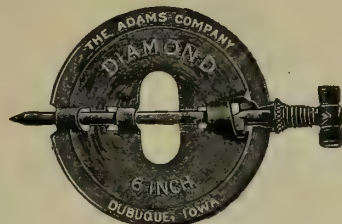
HERCULES

Sash Cord.

Star Brand Cotton Rope
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For Sale by all Wholesale Dealers.

DIAMOND STOVE PIPE DAMPER AND CLIP.



U. S. Patent June 25th, 1895.
 Canadian Pat. Dec. 13th, 1894.

Sold by Jobbers of ---
**HARDWARE
 TINWARE
 and STOVES,**
 for furnace pipe, to support
 the sheet steel blade.



Manufactured by **THE ADAMS COMPANY, Dubuque, Iowa, U.S.A.**
TAYLOR-FORBES CO., Limited, Guelph, Ontario.

**New Idea
 HOT BLAST HEATERS.**

The kind that get all the heat out of the fuel.

Mr. Dealer,

The first thing that appeals to your heater customer is **appearance**. In a heater, this point must be right to make it a ready seller. **New Idea Hot Blast Heaters** are right in this respect, as you may judge somewhat from the accompanying illustration.

The construction of the **New Idea Hot Blast** is perfect, and the operation is simple. Careful mounting and first quality of nickel make it a winner.

New Idea Hot Blast Heaters burn soft coal, hard coal, wood, coke and peat.

If you are in the market for a better line of Heaters than you are now handling, write us for further information.



Guelph Foundry Co., Limited, Guelph, Ont.

Western Representatives:

MESSRS. E. G. LOW & CO., WINNIPEG, MAN.

stove or furnace very much exceed those from an oil heater. Nevertheless there is a profitable trade to be developed in this sometimes overlooked side line and this is the time of year to prepare for it. For two or three months to come the evenings will be cool and yet there are few heads of families who want to start the furnace so early. A little persistent pushing and a little judicious advertising will sell a great many oil or gas heaters at this season. They can easily be handled and pushed successfully without interfering with the regular Fall stove and furnace campaign. While the head of the firm is busy superintending the larger operations he might with profit assign the development of this side line to a competent clerk. There is money in it and yet it is a department to which scant attention is often paid in stove and hardware stores.

Are Now Shipping Heavily.

The Metal Shingle & Siding Co., Limited, Preston, Ont., are now shipping more goods than they did before the fire at their works. During the past week they sent out seven cars of goods to points in Western Ontario, Manitoba and British Columbia.

RECIPROCITY AS TO PATENTS.

SIR W. LLOYD WISE, Southend-on-Sea, Essex, England, senior past president of the Chartered Institute of Patent Agents, was a guest at the King Edward Hotel, Toronto, last week. He was recently knighted for his work in connection with the advancement of the patent laws of the British Isles. During the course of his professional undertakings he has had much to do with the protection and development of machinery, and inventions, not only in the Mother Country but throughout the world. The recently adopted Patent Act of Great Britain and Ireland contained a novel examination scheme, which was propounded by him some thirty years ago, and which he has consistently advocated ever since. Sir Lloyd was in Canada two years ago, and was chiefly instrumental in introducing compulsory license and other improvements in our Patent Act. He will make a tour of Canada, and before leaving will read a paper on patents before the Canadian Manufacturers' Association, in which he will suggest the adoption by the Dominion of reciprocal relations as regards patents with other countries, more especially with respect

to compulsory manufacturing and licenses, and importation of patented articles.

In an interview Sir Lloyd stated that he was an ardent advocate of Mr. Chamberlain. While Mr. Chamberlain might perhaps hardly succeed in the next contest, he believed he would win in the general elections following.

"I am greatly interested in Imperial unity," said Sir Lloyd, "even if I have to pay a little higher for a loaf. There must, however, be some give and take between the various parts of the Empire. I strongly support Mr. Chamberlain's retaliatory policy, and I do not believe in worrying about what other countries will do. The question for us is how best to take care of ourselves and by ourselves, I mean the whole Empire."

"Are not some British manufacturers opposed to Mr. Chamberlain's plan?"

"Yes, and they are chiefly men who are engaged in working up dumped materials, such as steel, or political enemies, who are angered at his success. Free trade, as we have it in England, is a farce, we have no right to let other countries dump their surplus goods into our market to the detriment of our own manufacturers."

THE NEW WAY

OF DOING BUSINESS

is for the manufacturer to assist the retailer all he can to sell his goods. The perfection of such methods is employed by the makers of

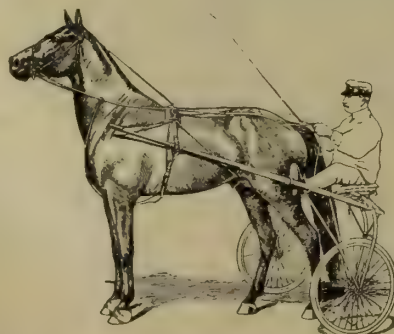
International Stock Food.

It is beyond the thought of the hardware man what we do to help him sell our food. Indeed, we practically sell it for him. We invite every hardware dealer in Canada to write us about this. We want you all to know how liberal, how thorough, our plans are.

International Stock Food, you are doubtless aware, is the best ever sold.

Don't let the agency for your territory fall into other hands. Write us about it to-day.

**International
Stock Food
Co., Toronto.**



A large lithograph of DAN PATCH free to any reader of this paper.



The Empire Queen.

You Can Sell the Empire Queen Range

There is not a woman who knows anything about a stove but what will approve of

The Empire Queen Range

It is built for business—easy to clean, looks well, is easy on fuel, draft arrangements are perfect, making it a rapid cooker.

Send for descriptive booklet
and price list.

The

Canadian Heating and Ventilating Co.,

OWEN SOUND, ONT.

Limited

THE "GOOD CHEER"

Art Base Burner

We are again preparing for another big run on this stove, but the demand has exceeded the supply every season so far, so order in good time, and if you have not yet seen this stove get a sample NOW, then follow up quick with your order, and we will see that you get them promptly.



There is nothing
"just as good"
made yet
—nor likely to be.

IT HAS
**NO
FAULTS**

Firepot removable
without turning a
single bolt.

Has Duplex Grate
and large ash pan.

Every stove a
Double Heater.

Has Steel Oven.

With or without
oven.

The JAMES STEWART MFG. CO., Limited
Woodstock, Ont. and Winnipeg, Man.

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Secretary—W. H. Meredith, Toronto.
Executive Committee—The officers and H. Mahoney, Guelph; S. Mellon, Hamilton, and E. H. Russell, London.

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President—Thos. O'Connell.
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President—Robert Ross.
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LONDON.

President—B. Noble.
Vice-President—Wm. Smith.
Secretary-Treasurer—E. H. Russell.

THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Sept. 15, 1904.

A FURTHER improvement in trade conditions is reported by the local supply houses. In August, business was comparatively slack and the prospects for Fall business in heating and plumbing supplies were not regarded as very bright. September has, how-

ever, opened out well and already the supply houses have all the business they can conveniently handle. Iron pipe is selling in large quantities but, as before, prices are being cut and our quotations are merely nominal. Range boilers are in good demand. Collections are reported good and the trade seems to be in a healthy condition.

Range Boilers—In steady demand owing to the large amount of building through the country. Quotations continue as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—In better demand. Prices continue unchanged. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—Sales are increasing. Quotations are: Light soil pipe, 3 to 6 inches, 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe and Fittings—Increased activity has been the feature of this market during the week, but, as before, business is obtained at cut prices and our figures are merely nominal. To 6 inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fairly good trade is being done, affected to some extent by the general slackness prevailing. Discounts at 15 per cent. continue on the new prices issued some time ago.

Iron Pipe—Competition in this line has not been quite so keen during the last three or four weeks. Business is somewhat quiet, but dealers look for it to pick up soon. Prices are quoted unchanged since last issue. We quote f. o. b. Toronto as follows; Black pipe,

1-8 in., \$1.85 to \$1.95; 1-4 in., \$1.88 to \$2.05; 3-8 in., \$2.04; 1-2 in., \$2.18; 3-4 in., \$2.72; 1 in., \$3.90; 1-1-4 in., \$5.35; 1 1-2 in., \$6.40; 2 in., \$8.55. Galvanized pipe, 1-4 in., \$2.57; 3-8 in., \$2.82; 1-2 in., \$2.98; 3-4 in., \$3.82; 1 in., \$5.48; 1 1-4 in., \$7.48; 1 1-2 in., \$8.28; 2 in., \$11.97.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.

Soldering Irons—Prices are as follows: 1 to 1 1-2 lbs., per lb, 37c; 2 lbs and over, 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, Sept. 16, 1904.

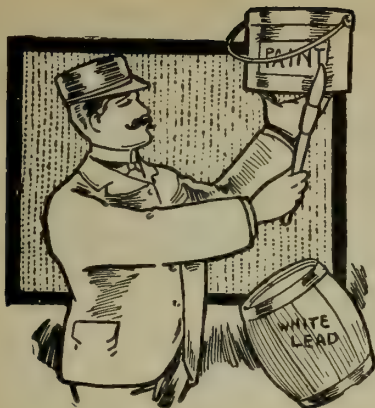
THE feature of the market is a reduction in iron pipe this week.

Prices all along the line have been lowered. Otherwise there is no change, though at time of writing this report a change in enameled ware quotations is anticipated. There is an improved outlook for local business as a consequence of the end of the builders' strike in Toronto. The demand throughout Ontario is unchanged.

Lead Pipe—There is a fair business being done in this line, although the slackness of the general market is felt to some extent. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—There is a quiet feeling on the market in unison with the general market. Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe and Fittings—A very fair business is being done, considering the general quiet feeling on the market. Prices remain as quoted last week. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up



It is always ready for the brush, easy to stir up because it never settles down. This is

Ramsay's Rubber Roof Paint

and is made for the farmer's barn, the roofs of houses, fences, bridges, and everything that wants protection.

We are the sole makers of Rubber Roof Paint. We introduce rubber into this paint by our own special process.

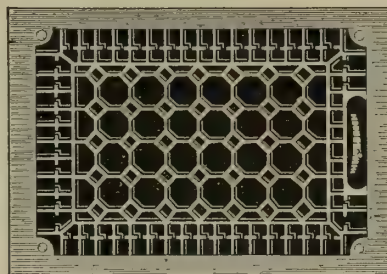
We guarantee a perfect paint for all classes of roofs. It is a beautiful glossy black, easily applied, sells for \$1.00 in gallon cans and brings you a good profit.

A. RAMSAY & SON
MONTREAL

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1842

PAINT
MAKERS

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

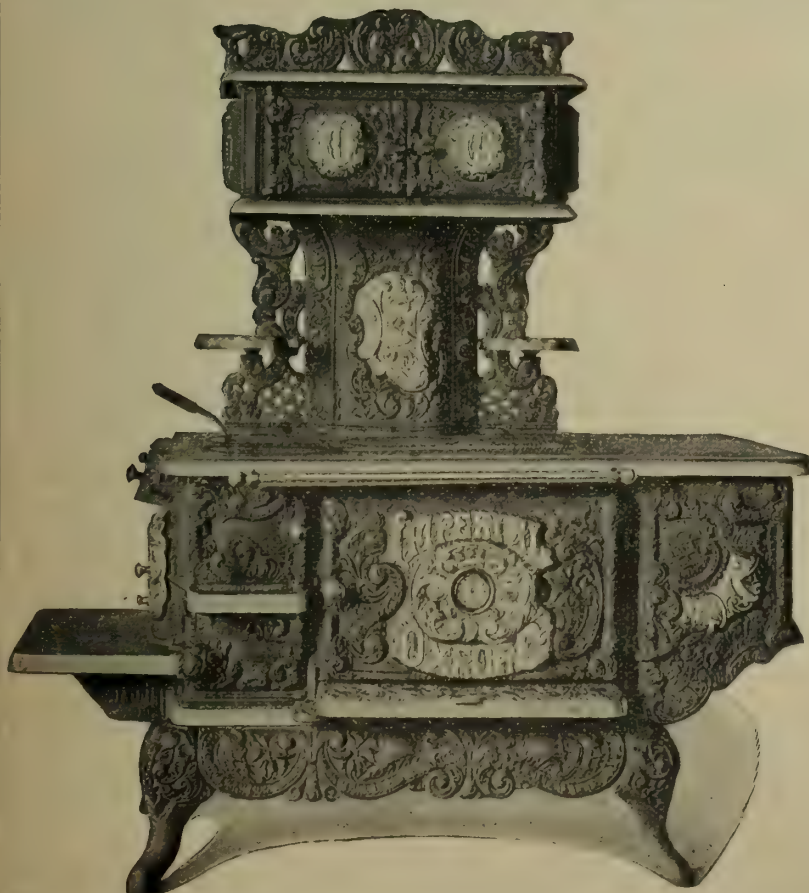
OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



The Imperial Oxford Range is bringing good business to the merchants who handle it. It will bring you business too. Get the agency for the

Imperial Oxford Range

for your district and you'll have the best stove trade in your town.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.

CANADIAN PLUMBERS WERE MADE WELCOME.

Reported for HARDWARE AND METAL by W. H. Meredith.

FOR some time past there has been a growing feeling that there should be a closer relationship between the National Master Plumbers' Association of Canada and the National Association of the United States. It has been found that in many ways the interests of the two associations are the same, that what was of benefit to one was of equal value to the other. Both associations are aiming to reach the same standard of proficiency in sanitation, in heating and in ventilation, to aid in bringing about the interchange of thoughts and ideas in these matters.

The retiring president of the United States association, E. D. Hornbrook, Kansas City, Mo., extended an invitation to the Canadian association to send over a representative delegation to the meeting of the United States association, held in St. Louis, September 6, 7 and 8. In response President Robert Ross, together with Fred Armstrong, R. W. Harrison and Secretary W. H. Meredith, of the Canadian association, were selected to attend the convention.

These gentlemen left Toronto on Friday, September 2, and on their arrival in St. Louis were, with many other delegates arriving from various parts of the United States, given a cordial reception and escorted to the convention headquarters, the Hotel Hamilton.

The business session of the convention opened on Tuesday morning, about 600 delegates responding to the roll call and about as many more visitors being present.

President Hornbrook proved an excellent presiding officer. One of the first orders of business was the presentation of the Credential Committee's report, which included a recommendation that the privileges of the convention be extended to the Canadian delegates. This clause in the report was adopted.

Later President Hornbrook called the Canadian representatives to the platform.

Robert Ross, as president of the Canadian association, expressed in his own happy style appreciation of the invitation extended and of the warmth of the reception accorded himself and his fellow Canadians by the meeting. On behalf of the Canadian association he extended a warm invitation to the United States organization to send a representation to the meeting of the Canadian association at Winnipeg in July next.

Secretary Meredith drew attention to the fact that the United Association of Journeymen Plumbers and Steamfitters had found it wise to include Canada as well as the United States in its scope, and pointed out that there was even more reason why the masters should

work together than the journeymen should. It was said that the two great Anglo-Saxon peoples held the universal peace of the world in their grasp; there was just as much reason why they should hold the universal health of their peoples sacred. This could best be done by an interchange of ideas, and to this end the closer the two bodies got together the better for all.

Fred Armstrong informed the United States brethren that the Canadian institution was comparatively young and consequently was alert to learn as much as possible from the older association across the border, and fully appreciated the opportunity accorded the Canadian delegation to acquaint themselves with their methods of working. He felt that this innovation would result in creating a stronger feeling of unity between the two national bodies.

Robt. W. Harrison stated that he was the junior member of the delegation, and while the previous speaker had said about all that could be said, he would carry back such pleasant recollections of the hospitable reception extended the Canadian delegates, that he would look forward to the opportunity of extending a welcome to visitors from the United States.

In addition to this opportunity to extend fraternal greetings the Canadian representatives were invited to appear before the Board of Directors to discuss the possibility of a closer affiliation between the two associations.

The Canadian delegation's request embodied a suggestion that supply houses whose home offices were in the United States should secure from the officers of the Canadian association a list of the master plumbers of the Dominion who are recognized as legitimately engaged in the business. As a matter of courtesy to the Canadian fraternity it was requested that United States plumbing contractors should notify the secretary of the Canadian local associations whenever they enter a competitive bid for work in the Dominion.

The convention in executive session was unanimous in granting the courtesies requested by the Canadian delegation and enthusiastically granted a full measure of fraternal and business courtesy to the visitors and the Canadian National Association.

A CANADIAN PRESIDENT ELECTED.

A development which pleased the Canadian representatives was the election of David Craig, of Boston, a former Canadian, as president-elect of the United States association. Mr. Craig, who is a tall man of commanding presence, was born in St. John, New Bruns-

wick, about forty-one years ago, and since removing to Boston has won for himself widespread respect, culminating in his election to the highest office that could be offered him by the members of the profession in the United States.

The election of officers resulted as follows:—

President—David Craig, of Boston.

Vice-President—Chas. J. Boyd, of Chicago.

Treasurer—Wm. E. Goodman, of Milwaukee.

Secretary—David Shannon, of Boston.

All the Canadian delegates returned to Toronto enthusiastic over the reception and treatment accorded them. They state that the St. Louis master plumbers could not be excelled as hosts, while the officers of the association, especially Past-President Hornbrook and President Craig, were extremely kind and thoughtful to them throughout the convention week.

Ball Season About Ended.

The baseball season, as viewed by the Toronto plumbing fraternity, is about ended. A great match was fought out on Saturday between teams picked from the masters and journeymen representing East Toronto vs. West Toronto. The score was 5 to 3 in favor of the East, good work at the bat by "Charley" Robinson throughout and a big hit by Kenneth Allison in the last innings making the victory a sure thing for the Easterners. The final game will be one between the masters and the supply men, and will probably be played next Saturday, September 24.

Building Permits.

MONTREAL.

E. Lacavalier, 690 Berri, one dwelling, \$7,000.

A. Bayer & Frere, three dwellings, \$2,500 each.

Wm. Kennedy, 198 Ottawa, one dwelling, \$1,500.

Alphonse Allard, 556c Frontenac, one dwelling, \$1,200.

A. Lusignan, 760 Lafontaine, one dwelling, \$2,500.

A. Groleau, 189 Notre Dame, one dwelling, \$4,200.

East End Methodist Church, church building, \$14,000.

V. Forest, 177 Craig street, two dwellings, \$6,000 each.

P. Wilson, 27 Frontenac, four dwellings, \$2,500 each.

Hugh Graham & Co., "Star" building, stable, \$5,200.

A. Lapine, 214 Christophe Colombe, one dwelling, \$1,800.

James McMenamin, 189 St. Charles, two dwellings, \$2,000 each.

Estate Thos. Mussen, 1689 Notre Dame street, one warehouse, \$40,000.

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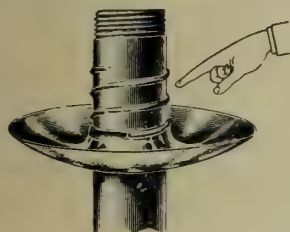


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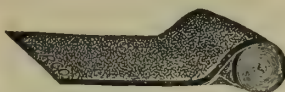
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Provided with Bail
Handle with which
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INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Granby Mining and Smelting Co., Montreal, one of the largest mining companies in British Columbia, has passed into the control of J. J. Hill, of the Great Northern, which will now get the benefit of the great freight traffic, over \$600,000 a year, formerly secured by the C.P.R.

• • •

Contracts for the sub-station of The Toronto & Niagara Power Co., to cost \$100,000, were to have been awarded on Tuesday, but on account of the absence from Toronto of the president the tenders were not opened. It is expected that the contracts for the company's power house and sub-station at Niagara, to cost \$300,000 and \$100,000 respectively, will be awarded within a month. E. J. Lennox is architect for all three.

• • •

The C.P.R. have practically closed a contract with The Consolidated Lake Superior Company for the delivery of 40,000 tons of steel rails. The Steel Company have undertaken to deliver 10,000 tons a month, the first shipment to be made next February. There is still a question of specifications, but it is said all will be arranged satisfactorily. The first shipment of 1,000 tons of rails from the Soo for the Intercolonial arrived in Montreal on Monday.

• • •

S. Pearson & Son, Incorporated, who are building the Pennsylvania Railroad tunnels under the East River and Long Island City, have just awarded the contract for two complete compressed air power plants, ready to operate, to The Ingersoll-Sergeant Drill Company of New York. The combined capacity of the plants consists of 50,000 cubic feet of low pressure air per minute and 12,000 cubic feet of high pressure air per minute. It will be remembered that the same company recently received an order from The O'Rourke Engineering & Construction Company for the compressed air plants to be used in building the Pennsylvania tunnel under the Hudson River. The contract just awarded is the largest order ever placed in the history of the business.

NOTES.

The Grand Trunk Railway expect to start the construction of their round house at Mimico, near Toronto, at once.

The Simplex Railway Appliance Co. have bought a \$35,000 site for a factory, the foundations of which are to be started at once.

W. Thompson & Son, millers, London, Ont., are erecting a large grain storage warehouse in the rear of their Talbot street premises.

The Perrin Plow Works, Smith's Falls, Ont., have reached their capacity, 8,000 plows, and will need to enlarge their works.

The electric light plant of Killarney, Man., has been sold to Bert Kenaston, of Minneapolis and Winnipeg, who will operate it in the future.

Gillies & Martin, Teeswater and Listowel, Ont., have sold out their foundry at Listowel to Hay Bros., who will operate it on an enlarged scale.

The Dunlop Tire Co. has petitioned to have The Ewart Carriage Works, Limited, wound up, but the petition has been stayed a fortnight for additional proof.

Clark & Demill, who started to manufacture wood-working machinery in Galt, Ont., about four years ago, find extensions necessary. Hespeler is preparing a by-law to offer them a loan of \$15,000 if they remove to that place.

The Sawsmiths' Union of North America has elected the following officers:—Joseph Puhly, of Brooklyn, president; Chas. G. Woods, of Indianapolis, Ind., secretary-treasurer. The union will meet in Toronto in September, 1906.

The machinery, general equipment and stock in trade of The Marble-Swift Automobile Company of Canada, Woodstock, Ontario, is offered for sale by private tender by John Mackay, trustee, Toronto, on or before October 1. The plant is modern and well situated.

The Page Wire Fence Co., Limited, Walkerville, Ont., have secured orders for 240 miles of fencing along the Halifax Southwestern Railway, Nova Scotia, and for 80 miles of the new C.P.R. line from Guelph to Goderich, also 10 miles from the Southwestern Traction, London, Ont.

COMPANIES INCORPORATED.

Consolidated Construction and Power Co., Montreal; capital, \$100,000; directors,

Lewellyn E. Kimpton, merchant; Curtis Wallace Lester, trader; George Henry Boivin, gentleman; Howard Murray, secretary and Rodolphe Madore, manager, all of Montreal; purpose, to do general constructing and contracting work.

The New Pasteurizing Filter Co., Limited, Montreal; capital, \$90,000; directors, Joseph L. Perons, lawyer; Joseph R. Beaudry, Richard Beaudry, lawyer; Adrien Baudry, lawyer and Larmand Beaudry, agent, of Montreal.

The Atlantic Contracting Co. of Canada, Limited, Montreal; capital, \$500,000; directors, Robert D. McGibbon, lawyer; Victor E. Mitchell, advocate; Alexander Chase-Casgrain, advocate; Louis Legault, gentleman and William Reginald Lee, of Montreal; purpose, to do general contracting or mining development work.

FACTORY DAMAGED.

The factory of the Ontario Lantern & Lamp Co., Hamilton, was seriously damaged by fire on Tuesday. The most damage was done in the press room in the old portion of the factory, and the soldering room above. The machinery, which is very valuable, was damaged considerably, and the loss could not be estimated that night by Walter Grose, the proprietor and manager. It was roughly placed at about \$10,000, fully covered by insurance. The firm write regarding the fire: "Owing to the serious fire at our factory we regret having to advise our many customers that we will be unable to fill any immediate orders. However, everything possible is being done to put our factory into running order and, as we have a large stock of raw material on hand which was not damaged, we shall be in a position to fill orders promptly within three weeks, and we hope our friends will bear with us in our time of trouble, assuring them that any orders placed with us for later shipment will be duly appreciated."

KEPT NO TRACK OF ORE.

An Ottawa despatch says: "Application has been made to the Department of Trade and Commerce by a company at Bannoekburn, Ont., for the bounty upon the production of 50,000 pounds of pig lead. The company did not keep track, as provided for by the regulations, of the total production of ore from which the lead has been obtained, and while it is admitted that they have fairly earned the bounty, a change in the regulations will likely be necessary before it can be paid."

CHARLES BAYNES, England.
MAKER OF THE KNUZDEN BROOK, BLACKBURN,
"CLICK-CLACK"
HACK SAW BLADES.
In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited
HANOVER, ONTARIO.

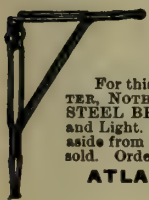
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Cables— Emlyn Engineering Works
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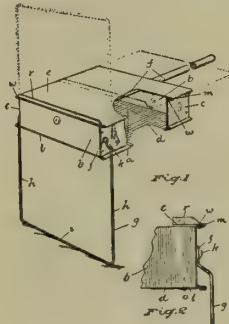
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TORONTO, ONT.

STRIKES AND APPRENTICES.
SUCH instances as that of the
moulders' strike at Worcester,
Mass., are not only discouraging
to the employer in the carrying out of
his apprentice system, but at the same
time they do much to rob trade union-
ism as practiced in many recent strikes
of those elements that appeal to public
sympathy. The Moulders' Union, by
threat and promise, persuaded the Wor-
cester apprentices to leave their work,
being perfectly aware that the young
men would violate formally drawn con-
tracts bearing their signatures if they
joined the ranks of the strikers. Natur-
ally they will find it difficult to get em-
ployment again in Worcester foundries,
because they cannot be looked upon as
trustworthy. They were fully informed
by their employers of the consequences
of breaking their contracts and at the
same time were promised full protection
if they would remain at work. Though
they are to be censured for thus com-
mitting a breach of faith with perfect
knowledge of what they were doing, the
blame really rests with the older men,
the leading spirits in the union, who
caused such action.

In the neighboring City of Fitchburg,
where molders are on strike in an effort
to put a foundry under union rules and
regulations, the apprentices have not
been called out. But if they should
leave their work in that foundry, each
would cause the sacrifice of \$200 by one
of his friends, for each had to give
satisfactory bond for that amount be-
fore he was taken as an apprentice. Pe-
haps some such repressive measure is
necessary in other foundries. Generally
the apprentice has to secure a family
friend as his bondsman, and such a per-
son would have an influence in shaping
the boy's action in case of a strike.

The selfishness of a union workman
who would deprive an apprentice of the
opportunity to reach the goal he is
striving for, to become a journeyman
and receive a journeyman's wages, mere-
ly to accomplish the personal ends of
the union workman, with nothing but
certain loss to the boy, is reprehensible.
At the same time it must be admitted
that the unions are not over friendly to
apprentices, placing onerous restriction
on their employment. When apprentices
are induced to strike, a thoroughgoing
unionist feels no regret for the plight in
which they may be placed if the strike
fails. A double purpose is accomplished.
The employer is further embarrassed by
being deprived of more of his help dur-
ing the strike, and if the apprentices are
subsequently refused reinstatement the
number of competing workmen is there-
by diminished. Every effort should be
made by the true friends of apprentices
to induce them not to cast their lot
with striking workmen.—The Iron Age.

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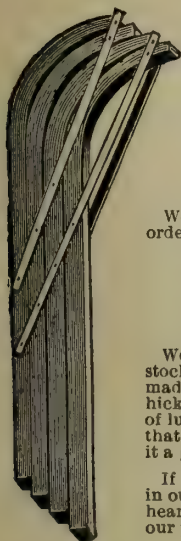
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Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.	
Pure in bbls., per cwt. Less than this quantity 1c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12 1/2
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 05
Whiting, bbl.	6 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.	
Per 100 lb.	
Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 80
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.	
Genuine, 560 lb. casks, per cwt	\$4 25
Genuine, 100 lb. kegs.	4 75
No. 1, 560 lb. casks, per cwt	4 00
No. 1, 100 lb. kegs, per cwt	4 25

WHITE ZINC.	
Extra Red Seal	0 06
French V. M.	0 06
Lehigh	0 06

DRY WHITE LEAD.	
Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs.	4 25

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In 1/2, 1 and 1-gallon tins.	
Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
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Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle"	1 00
Outside, bbls	0 55
Island City House Paint	1 25
"Floor"	1 25
Sterling House Paint	1 20
"Floor"	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 10
Bladders in kegs, boxes or loose.	1 85
25-lb. tins.	1 80
12 1/2 lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

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In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 10	1 25
Furniture, extra	1 10	1 25
"No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Damar	1 75	2 00
Shellac, white	2 40	2 50
orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
black japan	1 10	1 20
"No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each.	2 00	2 00
Granitine floor finish, per gal.	2 75	2 75
Maple Leaf coach enamels; size 1, size 2, 70c.; size 3, 40c. each.	\$1.20	\$1.20
Sherwin-Williams' kopal varnish, case, from	to 1 gal., \$2.50.	assorted

GLUE.

Common	0 08	0 08 1/2
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 18	0 20
Coopers	0 19	0 20
Hutner	0 12	0 16
Ground	0 12	0 16
Cologne, genuine		

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AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, vld 20 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 5 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

Best thick brown or grey felt wads, in 1/2-lb. bags	per lb.
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

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Wright's, 80-lb. and over	0 10 1/2
Hay Budden, 80-lb. and over	0 09 1/2
Brooks's, 80-lb. and over	0 11 1/2

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AMERICAN AXE AND TOOL CO.

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hunters, 5 25

Underhill American Bench Axes, 40 p.c.

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Ordinary, per gross

Best quality

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Nickel, 55 per cent.

American make, discount 63 1/2 per cent.

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Blacksmiths, discount 40 per cent.

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Standard, 60 and 10 per cent.

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Agricultural, not wider than 4 in., 75 per cent.

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Gilmour's, discount 60 per cent.

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BLIND AND BED STAPLES.

All sizes, per lb.

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Carriage Bolts, common (\$1 list)

" 3-16 and 1/2

" 5-16 and 1/2

" 7-16 and up

" full sq. (\$2.40 list)

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Machine Bolts, 7-16 and up

Plough Bolts

Blank Bolts

Bolt Ends

Sleigh Shoe Bolts

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Nuts, square, all sizes, 4c. per lb. off.

Nuts, hexagon, all sizes, 4c. per lb. off.

Stove Rods per lb., 5 1/2 to 6c.

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Small and medium, ball

Small heel

BRIGHT WIRE GOODS.

Discount 82 1/2 per cent.

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American	"	12 00	18 00

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Loose Pin, discount 65, 10 and 2 1/2 per cent.

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Gen. B ronzed

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American

Bullard's

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Bed, new list, discount 55 to 57 1/2 per cent.

Plate, discount 52 1/2 to 57 1/2 per cent.

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CHALK.

Whiters' Colored, per gross

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Red

Crayon

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Worm

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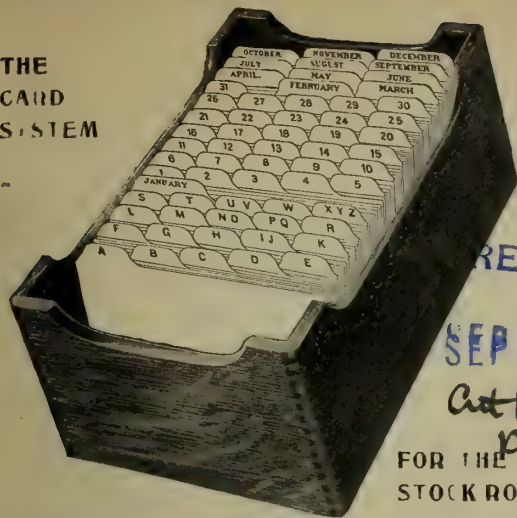
per doz.

International Stock Foods, per pail

" " per bbl.

" Poultry \$1 pkgs. per doz.

" Worm Powders,

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Instal This Modern Stock-Keeper

Every up-to-date business house uses our card systems. Having worked successfully for others, isn't it reasonable to expect it to do the same for you? It's the short cut to success. Let the old method out. Get in the new. Write for catalogue or call at

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English per doz. 2 00 5 00

PLIERS AND NIPPERS.

Button's genuine, per doz. pairs, discount

37½ to 40 per cent. per doz. 5 00 9 00

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PRESSED SPIKES.

Discount 20 per cent.

PULLEYS.

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" hollow per inch 1 00

RAKES.

Wood per doz. net 1 20 up

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" King Cutter 12 50 15 00

Wade & Butcher's 3 60 10 00

Theile & Quack's 7 00 12 00

Carbo Magnetic 15 00

Griffon Barber's Favorite 10 75

Griffon No. 65 13 00

Griffon Safety Razors 13 50

Griffon Stropping Machines 13 50

Lewis Bros. "Klean Kutter" 8 50 10 50

Claus, 50 and 10 per cent.

Claus Strops, 50 and 10 per cent.

REGISTERS.

Discount 40 per cent.

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Iron Rivets, black and tinned, 60 and 10 p. c.

Iron Burrs, discount 55 per cent.

Extras on Iron Rivets in 1-lb. cartons, 1c.

per lb.

Extras on Iron Rivets in 1-lb cartons, 1c.

per lb.

Copper Rivets, with usual proportion burrs, 45

per cent. Cartons, 1c. per lb. extra, net.

Copper Burrs only, discount 30 and 10 per cent.

Extras on Tinned or Coppered Rivets, 1-lb.

cartons, 1c. per lb.

RIVET SETS.

Canadian, discount 30 to 37½ per cent.

ROPE, ETC.

Sisal 0 11½

Pure Manila 0 14½

" British " Manila 0 22

Cotton, 3-16 inch and larger 0 20½

" 5-32 inch 0 25

" 1 inch 0 25

Russia Deep Sea 0 16

Jute 0 09

Lath Yarn, single 0 10

" double 0 10½

Sisal bed cord, 48 feet per doz. 0 65

" 60 feet 0 80

" 72 feet 0 95

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Boxwood, discount 55 per cent.

Ivory, discount 37½ to 40 per cent.

SAD IRONS.

Mrs. Potts, No. 55, polished, ... per set 0 80

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Common, plain, " 4 50

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B. & A. sand, discount, 40 and 5 per cent

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on list.

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Bronzed iron with hooks ... per 1,000 7 50

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Hand, Diaston's, discount 12½ per cent

S. & D., discount 40 per cent.

Crosscut, Diaston's, ... per foot 0 35 0 55

S. & D., discount 35 per cent. on Nos. 2 and 3.

Hack, complete, ... each 0 75 2 75

" frame only, ... each 0 50 1 25

SASH WEIGHTS.

Sectional, ... per 100 lb. 2 00 2 25

Solid 1 50 1 75

SASH CORD.

Per lb. 0 28 0 30

SAW SETS.

per doz.

Lincoln and Whiting 4 75

Hand Sets, Perfect 4 00

X-Cut Sets, " 7 50

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Gurney Standard, 40 per cent.

Gurney Champion, 50 per cent.

Burrow, Stewart & Milne—

Imperial Standard, discount 40 per cent.

Weigh Beams, discount 35 per cent.

Champion Scales, discount 50 per cent.

Fairbanks standard, discount 35 per cent.

" Dominion, discount 55 per cent.

" Richelleu, discount 55 per cent.

Warren's new Standard, discount 40 per cent.

" Champion, discount 50 per cent.

" Weighbeams, discount 35 per cent.

SCREW DRIVERS.

Sargent's per doz. 0 65 1 00

SCREEN DOORS.

Common doors, 2 or 3 panel, walnut

stained, 4-in. style per doz. 6 50

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green stained, 4-in. style per doz. 6 75

Common doors, 2 or 3 panel, in natural

colors, oil finish per doz. 8 75

3-in. style 20c. per dozen less.

SCREWS.

Wood, F. H., bright and steel, discount 87½

per cent.

Wood, R. H., bright, dis. 82½ per cent.

" F. H., brass, dis. 80 per cent.

" R. H., " dis. 75 per cent.

" F. H., bronze, dis. 75 per cent.

" R. H., " dis. 70 per cent.

Drive Screws, dis. 87½ per cent.

Bench, wood per doz. 3 25 4 00

" iron 4 25 5 00

Set, case hardened, dis. 60 per cent.

Square Cap, dis. 50 and 5 per cent.

Hexagon Cap, dis. 45 per cent.

SCYTHES.

Per doz. net 6 00 9 00

SCYTHE SNATHS.

Canadian, discount 40 per cent.

SHEARS.

Claus, nickel, discount 80 per cent.

Claus, Japan, discount 67½ per cent.

Claus, tailors, discount 40 per cent.

Seymour's, discount 50 and 10 per cent.

SHOVELS AND SPADES.

Canadian, discount 45 per cent.

SINKS.

Cast iron, 16 x 24 0 85

" 18 x 30 1 00

" 18 x 36 1 40

SNAPS.

Harness, German, discount 25 per cent.

Lock, Andrews' 4 50 11 50

SOLDERING IRONS.

1, 1½-lb. per lb. 0 37

2-lb. or over 0 34

SQUARES.

Iron, No. 493 per doz. 2 40 2 55

" No. 494 3 25 3 40

Steel, discount 60 to 60 and 5 per cent.

Try and Bevel, discount 50 to 52½ per cent.

STAMPED WARE.

Plain, discount 75 and 12½ per cent. off re-

vised list.

Rotated, discount 75 per cent. off revised list.

STAPLES.

Galvanized 3 00

Plain 2 80

Coopers', discount 45 per cent.

Poultry netting staples, discount 40 per cent.

American discount 25 per cent.

STONE.

Washita per lb. 0 28 0 60

Hindustan 0 06 0 07

" slip 0 09 0 09

Labrador 0 13

" Axe 0 15

Turkey 0 50

Arkansas 1 50

Water-of-Ayr 0 10

Scythe per gross 3 50 5 00

Grind, 2-in., 40 to 200 lb., per ton 25 00

" under 40 lb., " 28 00

" under 2 in. thick, " 29 00

STOVEPIPES.

5 and 6 inch, per 100 lengths 7 00

7 inch 7 50

ENAMELINE STOVE POLISH.

No. 4, 3 doz. in case, net cash 4 80

No. 6, 3 doz. in case, " 8 40

TACKS, BRADS, ETC.

Carpet tacks, blued 80 and 15

" " tinned 80 and 20

" (in kegs) 40

Cut tacks, blued, in dozens only 80

" weights 60

Swedes cut tacks, blued and tinned—

In bulk 80 and 10

In dozens 75

Swedes, upholsterers', bulk 85, 12½ and 12½

" brush, blued and tinned

bulk 70

Swedes, gimp, blued, tinned and

japanned 75 and 12½

Zinc tacks 35

Leather carpet tacks 55

Copper tacks 50

Copper nails 52½

Trunk nails, black 65 and 5

Trunk nails, tinned 65 and 10

Clout nails, blued 65 and 5

Chair nails 35

Patent brads 40

Fine finishing 40

Lining tacks, in papers 10

" " in bulk 15

" " solid heads, in bulk 15

Saddle nails, in papers 15

" " in bulk 15

Tufting buttons, 22 line, in doz-

ens only 60

Zinc glaziers' points 5

Double pointed tacks, papers 90 and 10

" bulk 40

Clinch and duck rivets 45

TAPE LINES.

English, ass skin per doz. 2 75 5 00

English, Patent Leather 5 50 9 75

Chesterman's each 0 90 2 85

" steel each 0 80 8 00

TINNERS' SNIPS.

Per doz. net 3 00 15 00

Claus, discount 35 per cent.

THERMOMETERS.

Tin case and dairy, 75 to 75 and 10 per cent.

TRAPS (steel).

Game, Newhouse, discount 25 per cent.

Game, H. & N. P. S. & W., 65 per cent.

Game, steel, 72½, 75 per cent.

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Diaston's, discount 10 per cent.

German per doz. 4 75 6 00

S. & D., discount 35 per cent.

TWINES.

Bag, Russian per lb. 0 27

Wrapping, cotton, 3-ply 0 24

" 4-ply 0 27

Mattress per lb. 0 33 0 45

Staging 0 27 0 35

VISES.

Wright's 0 13½

Brook's 0 12½

Pipe Vise, Hinge, No. 1 3 50

" No. 2 5 50

Saw Vise 4 50 9 00

Columbia Hardware Co.

Blacksmiths' (discount) 60 per cent.

" parallel (discount) 45 per cent.

ENAMELLED WARE.

White, Princess, Turquoise, Blue and White

discount 50 per cent.

Diamond, Famous, Premier, discount 50 and

10 per cent.

Granite or Pearl, Imperial, Crescent, discount

50, 10 and 10 per cent.

Premier steel ware, 40 per cent.

"Star" decorated steel and decorated white,

25 per cent.

WIRE.

Smooth Steel Wire.

No. 0-9 gauge \$2 50

10 " 6c. extra.

11 " 12c. "

12 " 20c. "

13 " 30c. "

14 " 40c. "

15 " 55c. "

16 " 70c. "

Add 60c. for coppering and \$2 for tinning.

Extra net per 100 lb.—Oiled wire 10c.,

spring wire \$1.25, special hay baling wire 50c.,

best steel wire 75c., bright soft drawn 15c.,

charcoal (extra quality) \$1.25, packed in cases

or cases 15c., bagging and papering 10c., 50

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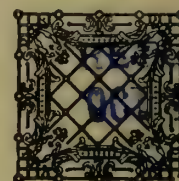
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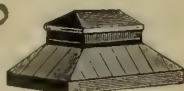
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With which any dealer can build up a lucrative business. Our travellers work with the trade and help them to close orders, and we try and make each transaction a stepping-stone to further business.

We are adding new Ceiling Goods and a line of Water Bowls and Stanchions for Cattle Barns, which will be a profitable line for the trade in agricultural districts.

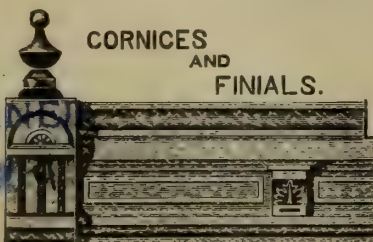
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AND
FINIALS.



WINDOW & DOOR CAPS.



PRESSED BRICK.

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Ontario Tack Co., Hamilton, Ont.

Ormsby, A. B., & Co., Toronto.

Pedlar People, Oshawa, Ont.

Phillips, Chas. D., Newport, Eng.

Smith & Hemenway Co., New York.

Stanley Rule & Level Co., New Britain,
 Conn.

Taylor-Forbes Co., Guelph, Ont.

Wilcox Mfg. Co., London, Ont.

Carriage and Waggon Ac-

cessories.

Covert Mfg. Co., West Troy, N.Y.

Loughed, J. S., & Co., Sarnia, Ont.

Steele, James, Guelph, Ont.

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Greening, B. Wire Co., Hamilton.

Oneida Community Co., Niagara Falls.

Churns.

Maxwell, David, & Sons, St. Marys.

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American Shearer Mfg. Co., Nashua, N.H.

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Cordage.

Brantford Cordage Co., Brantford.

Canadian Cordage and Mfg. Co., Peter-
 borough, Ont.

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Erie Specialty Co., Erie, Pa.

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Clausen Shear Co., Toronto.

Dorken Bros. & Co., Montreal.

Heinisch, R., Sons Co., Newark, N.J.

Lamplough, F. W., & Co., Montreal.

Silberstein, A. L., New York.

Smith & Hemenway Co., New York.

Walter, E. F., & Co., Montreal.

Wiebusch & Hilger, New York.

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 Canadian Corr. College, Toronto.
 Metropolitan Business College, Ottawa.
 St. Margaret's College, Toronto.
 Western Business College, Toronto.

Electric Fixtures.

Morrison James, Mfg. Co., Toronto.
 Munderloh & Co., Montreal.
 Sayer Electric Co., Montreal.

Engravers.

Legg Bros., Toronto.
 Smith, Geo. J., New York.

Files and Rasps.

Barnett Co., G. & H., Philadelphia, Pa.
 Disston, Henry & Sons, Philadelphia, Pa.
 Grose, Walter, Montreal.

Financial Institutions.

Bradstreet Co.
 British America Assurance Co., Toronto.
 Canadian Bank of Commerce, Toronto.
 Confederation Life Ass., Toronto.
 Liverpool & London & Globe Ins. Co.,
 Toronto.
 London Guarantee and Accident Ins.
 Co., Toronto.
 Metropolitan Bank, Toronto.
 Western Assurance Co., Toronto.

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 Harrington & Richardson Arms Co.,
 Worcester, Mass.
 Iver Johnson's Arms and Cycle Works,
 Fitchburg, Mass.
 Walter, E. F., & Co., Montreal.

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Ives, H. R., Co., Montreal.

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 Shaw, A., & Son, London, Eng.

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 Kerr Engine Co., Walkerville, Ont.
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 Ontario Wind Engine and Pump Co.,
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 Penberthy Injector Co., Windsor.

Mantels.

Batty Stove and Hardware Co., Toronto.

Manufacturers' Agents.

Gibb, Alexander, Montreal.
 Philip, David, Winnipeg.

Metals.

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 Canada Iron Furnace Co., Midland, Ont.
 Canada Metal Co., Toronto.
 Deseronto Iron Co., Deseronto, Ont.
 Gibb, Alexander, Montreal.
 Gilbertson, W., Pontardawe, Wales.
 Hankin, F., Montreal.
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 Kemp Mfg. Co., Toronto.
 Leslie, A. C., & Co., Montreal.
 London Rolling Mills Co., London, Ont.
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 Rogers, Henry, Sons & Co., Montreal.
 Samuel, Benjamin & Co., Toronto.
 Thompson, B. & S. H. & Co., Montreal.

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 McClary Mfg. Co., London, Ont.

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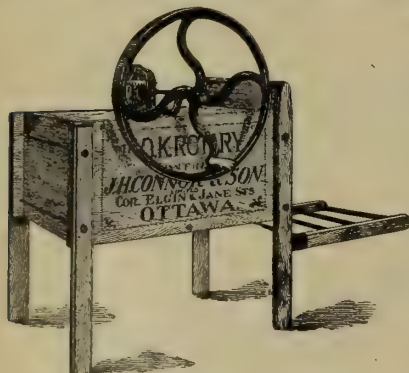


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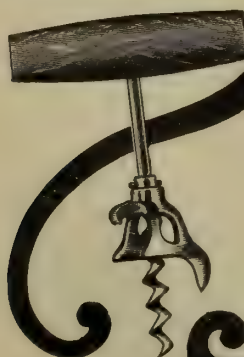
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A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
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VOL. XVI.

MONTREAL AND TORONTO, SEPTEMBER 24, 1904.

NO. 39

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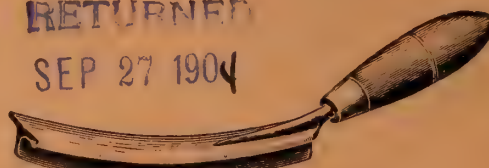
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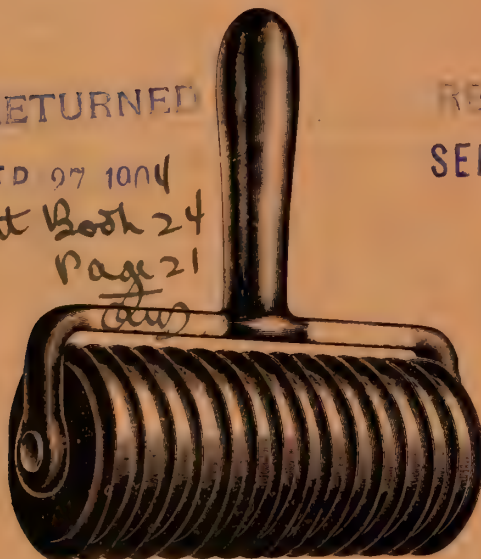


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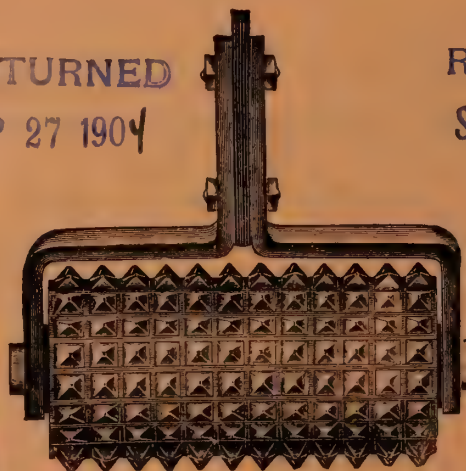
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6- 8- 10- 12 inches wide.

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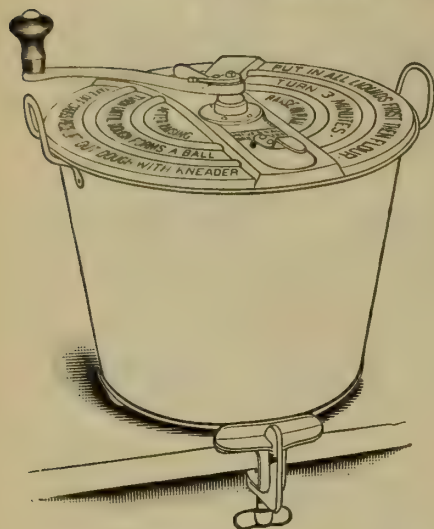


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ALL IN ONE.

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1840

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Building up trade is just like fishing.

If you use the right kind of bait and cast your line where the kind of fish you want are most plentiful, you'll quite likely get a number of bites.

Then if you go about it right you are pretty sure to land most of them.

Apply the illustration to business.

If you want to catch the hardware trade cast your line where all the good hardware merchants in Canada congregate every week—looking for bait to build up their businesses with—in **HARDWARE AND METAL**. But

Suppose results don't come at first
What be yew goin' tur dew?
Take out yewr ad, and kick yewrself,
An' go ter feelin' blew?
Uv course yew hain't; yew're goin' tew fish,
An' bait an' bait agin';
Bimeby some nibbles 'n bites 'll come,
Then yew'll pull 'em in.

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FULLY WARRANTED

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I. A. TOBIAS,
Canadian Agent.

THE CLAUSS SHEAR CO., 169 Spadina ave., TORONTO

CELEBRATED

HEINISCH SHEARS

Tailors' Shears,
Trimmers' Shears,
Tinnners' Snips, etc.



ACKNOWLEDGED THE BEST.

R. HEINISCH'S SONS CO.

NEW YORK OFFICE, 155 Chambers St.
NEWARK, N.J., U.S.A.



SEYMOUR SHEARS

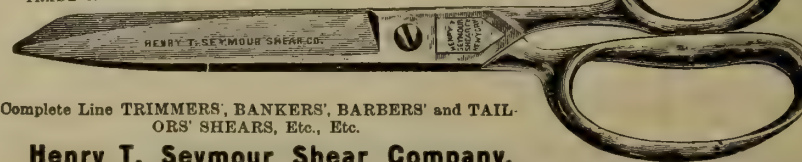
HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



TRADE MARK

Latest Catalogue will be sent in exchange for your business card.

Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.



AMERICAN COW TIES

Will outlast all others.

This is because the form of link, the exact size and shape of which are shown here, is such that the wear is distributed evenly over its entire end. The bearing surface is thus very large, and the chain will wear for years without becoming worn appreciably. The end of chains the bearing surface is only a very small portion of the extreme end of the link. Grooves are soon formed, and in a comparatively short time the links are worn or, properly speaking, cut-through.

These facts are well shown on a cow tie recently brought us for repairs. It was an ordinary No. 00 three chain tie. One chain was worn the other two American. One of the wire links was worn entirely through. The others were nearly as bad—a strong pull would have broken almost any of them. With the American chains, on the other hand, the wear was very slight, and hardly noticeable—three times this amount would not have weakened the chains seriously.

In addition, because of its flat link and smooth surface, American chain is much easier on the neck of the animal than the twisted or wire chain. The American chain cannot injure the animal's neck—other chains are liable to.

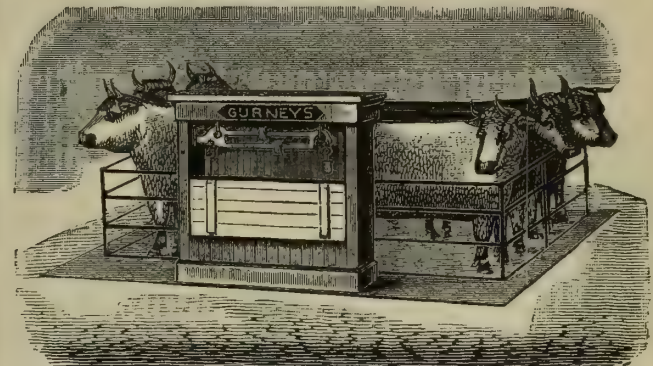
American Cow Ties are made in all the standard patterns and sizes. They are sold by all jobbers.

ONEIDA COMMUNITY, LIMITED
NIAGARA FALLS, ONT.

THE GURNEY STANDARD SCALES

Absolutely Accurate and Reliable. The Best of Material and Workmanship. Recognized throughout Canada as

"THE STANDARD"

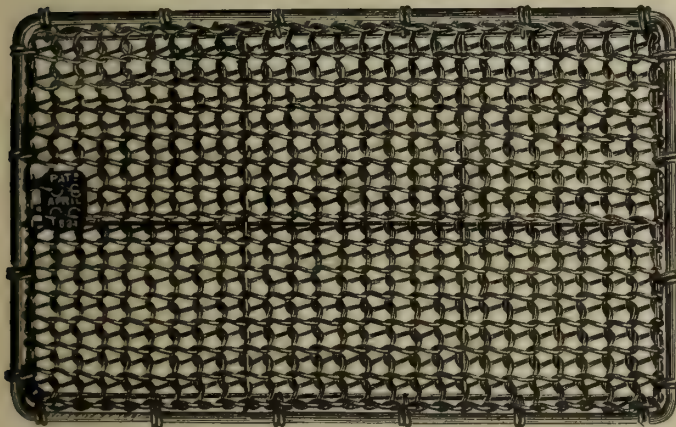


We make scales of every description. Established 1856.
Send for catalogue and printed matter.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse: The Gurney-Massey Co., Limited Montreal, Que.
Western Warehouse: The Gurney Stove and Range Co. Limited, Winnipeg, Man.

Wire Door Mats



The most durable, cleanest and perfect sanitary Mat made.

Has been on the market for 20 years.

All sizes and shapes made to order.

For stock sizes see catalogue.

THE B. GREENING WIRE CO.,
Hamilton, Ont. Montreal, Que. LIMITED

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.**

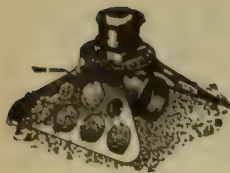
WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.
MONTREAL and TORONTO LIMITED



"Pullman"
Lawn Sprinkler
IS YOUR
ORDER IN?
Send for Folder No. 14.
PULLMAN MFG. CO
Rochester, N.Y., U.S.A.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and
ELECTRO PLATE.**
Ask for our Catalogue and Quotations.



Dundas Axe Works

DUNDAS, CANADA.

Write for Prices

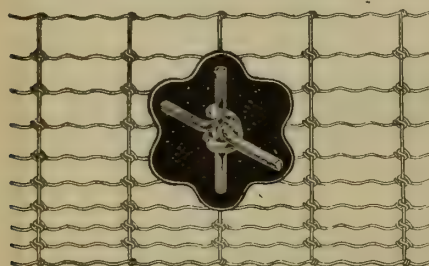
P. BERTRAM, - Manager.

W. E. IRONS H. L. ANDERSON GEO. PETTET

NOTICE

The PARSONS-IRONS Co., Toronto, makers of and dealers in all kinds of **Seals, Stencils, rubber, steel and brass Stamps**, has been succeeded by the subscribers.

THE SUPERIOR MFG. CO.
58 Adelaide St. W., - TORONTO.
Long Distance Phone—Main 5151.



IDEAL FENCING

Is Strong and Durable, because Large Gauge (**No. 9**) Steel Galvanized Wire is used throughout. SEE OUR EXHIBIT AT PRINCIPAL FAIRS, or write for Catalog.

Write for Catalogue.

The McGregor-Banwell Fence Co., Limited,
WALKERVILLE, ONT.

Merrick, Anderson & Co., Winnipeg, Man.
Sole agents for Man. and N.W.T.

A FULL LINE OF

**Wire
Springs**

FOR THE

Carriage and Furniture Trade

JAS. STEELE, Guelph, Ont.

A SAMPLE ORDER SOLICITED.

Soon will be Furnace Time

Furnace Cement will be wanted. There is one kind better than all others—

STERNE'S ASBESTOS FURNACE CEMENT

Vitrifies without shrinking; non-porous; odorless. Will keep soft longer, get harder, and stand more heat than any other cement made. Money back if not as we say.

G. F. Sterne & Son, Sole Mfrs., Brantford, Ont.

J. H. HANSON, 422 St. Paul St., Montreal, Eastern Agent.

STANLEY RULE & LEVEL CO.,

NEW BRITAIN, CONN., U.S.A.

IMPROVED CARPENTERS'
TOOLS

SOLD BY ALL HARDWARE
DEALERS.

SPRINGS

FLAT—SPIRAL OR VOLUTE

INTERESTING CATALOG MAILED ON APPLICATION

THE WALLACE BARNES CO.

BRISTOL CONN.

DILLON-HINGE-STAY

Why handle Barb and Coiled Wire at no profit when you can have a fair margin on our

Dillon Fencing



Got up specially for the hardware trade.

Easily put up and at the most moderate prices.

Write for prices in car or small lots.

CAVERHILL, LEARMONT & CO.,

Montreal and Winnipeg

Eastern and Western Agents

OWEN SOUND WIRE FENCE CO., Limited

Owen Sound, Ont.

Cordage

Of every description.

Net Mountings,

Sand Line,

Unoiled Cordage,

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Extra Long Lengths,

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Shingle Yarn.

Core Rope,

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Russian Packing,

Deep Sea Lines,

Ancor Line,

Good Transmission Rope,

Engine Packing.

Clothes Lines,

Only Best Material Used.

Log Line

Twine.

Dangerous to use Inferior Cordage.

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Orders

Now

To us and

Recieve

Exceptional

Attention.

Low-priced goods are not always
the cheapest.

TRUE BRAND CUTLERY



POCKET CUTLERY, RAZORS, SCISSORS,

QUALITY GUARANTEED

BEST GOODS

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., Montreal

PRICE is a good thing,—but,

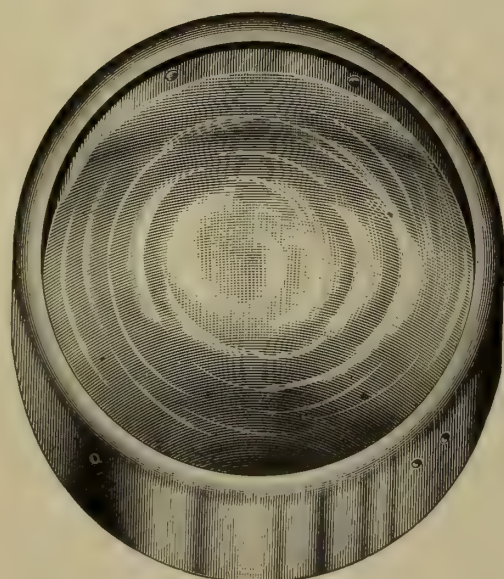
QUALITY is better.

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.

Kemp's Milk Can Trimmings.

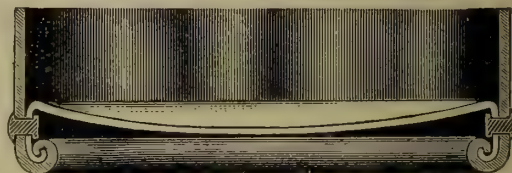


The reason for the steadily increasing demand for these is owing to the fact that

They Possess ALL the Essential

Features of a PERFECT Trimming.

Strength,
Durability,
and
Completeness
of Finish.



They are so constructed as to be easily put together.

Manufactured in all sizes—10 to 40 gallons.

Narrow top hoops supplied if desired.

We always carry in stock a full line of Tinned Iron of the finest quality, which we are prepared to supply at lowest market prices.

We will be pleased to quote you.

KEMP MANUFACTURING CO., TORONTO, Canada

DESCRIPTION OF NERNST LAMP.

By E. R. Roberts.

ARTIFICIAL illumination is one of the necessary conveniences of our social and business life, and methods of producing it are older than history, but it is only the past few decades that have witnessed extraordinary activity in improving the sources of supply. It is interesting to note that of all illuminants which have ever been used, not one has been discarded.

Through the agency of arc and incandescent lamps, electricity now plays an important part in our every-day life; it being a recognized fact that electric lighting is far superior to any other in point of health and convenience. Never-

Nernst exhibited in this country his new type of electric incandescent lamp.

The nucleus, or light-giving element of the lamp, is termed a "glower." It is made by passing through a die, a dough composed of the oxides of the rare earths, mixed with a suitable binding material. The porcelain like string thus formed, is cut, after drying, into convenient lengths. It is then baked and terminals are attached by means of which a current of electricity may be passed through the glower. The terminal connection between the glower and lead wire, as Dr. Nernst usually made it, consists of a few turns of platinum wire wound round each end of the glow-

capable of constantly withstanding a much higher temperature than is the filament of the ordinary incandescent lamp, it admits of greater economy of operation and provides a superior color and quality of light. Glowlers are insulated when cold, but become conductors when hot, hence they must be heated before they will conduct electricity sufficiently well to maintain themselves at a light-emitting temperature. From the many phenomena observed in studying the operation of glowlers under various conditions, it seems altogether probable that the glower is a solid electrolyte, and, furthermore, oxygen apparently is useful in its operation.



Fig. 1.—One-Glower Lamp.

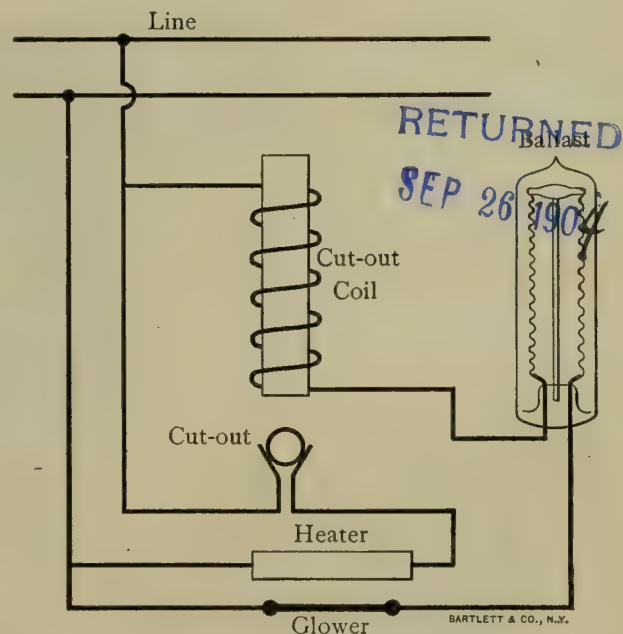


Fig. 2.—Glower Connections.

theless, our present means of illumination are still considered to be very inadequate, particularly in point of efficiency, and scientists and engineers are continually striving for improvement in various directions.

As evidence of this activity in the gas lighting field, we have the Welsbach mantle, which has effected a great improvement both in the quality and economy of gas lights. It has remained, however, for a German scientist, Dr. Nernst, of Goettingen, to accomplish for electricity what Welsbach did for gas. It was early in 1898 that Dr.

er, the convolutions being finally pasted with cement. Another successful terminal is one in which beads of platinum are imbedded in the glower ends, and through which lead wires are subsequently attached. With this any shrinkage of the glower material results in a firmer contact with the platinum.

The glower of a standard 220 volt Nernst lamp is about one inch by one-thirty-second of an inch in diameter. This glower possesses many interesting features and advantages. It is an oxide incapable of further oxidation, therefore operative in the open air, and being

The electrolytic phenomena appear to be more marked with direct than with alternating current, and it is thus found desirable in practice to provide a different form of glower for each system.

The characteristic of the glower, with reference to voltage and current, is remarkable, and has given rise to a steady resistance, called the ballast. As the current traversing the glower is increased, the voltage across its terminals rises, at first rapidly, and then more and more slowly to a maximum. It then drops off with increasing rapid-

ity as the current through the glower and the resulting temperature continue to increase. Beyond the point of maximum voltage, the rapid decrease in the resistance of the glower makes the current difficult to control. Without a steadying resistance such a conductor would rapidly develop a short circuit and flash out. In the Nernst lamp this steadying or ballasting is accomplished by means of a fine iron wire, mounted in a small glass tube somewhat resembling a miniature incandescent lamp. The diameter of this wire in a .4 ampere ballast is less than .002 inches smaller than a hair. As stated before, the glower must be heated before it will conduct current and become incandescent. In the commercial lamp it is therefore necessary to provide an electric heater and an automatic means of cutting same out of circuit after it has performed its function of lighting the glower, thus preventing an unnecessary waste of energy. The heater consists of tubes of porcelain over-wound with fine resistance wire. These are mounted in close proximity to the glower and are automatically disconnected from the circuit, as explained above, by a small electro-magnetic "cutout," which in turn is actuated by the current flowing through the glower.

The engineers who developed the Nernst lamp kept in mind from the outset the importance of a correct distribution of light, and before determining the general form of the new lamp, studied carefully the desirable and objectionable features of other illuminants. It was found that the horizontal rays from the arc lamp, for instance, were generally unsuitable, and after careful consideration, it was decided to make a more downward distribution of the light. In this connection it is interesting to note what is found in Nature. The sun at rising and setting projects its rays horizontally into our eyes, but at such times the light is much softened and the intensity greatly reduced. During the working part of the day, however, the sun reaches a position in which the light can be greatly intensified without injury or discomfort to the eyes. Our eyes are well protected from these vertical rays, but are unsuited for light projected in a horizontal direction, and it is obvious that we are unaccustomed to a horizontal distribution of intense light in Nature, but at the same time it is uncomfortably evident that horizontal distribution is found in the methods of street lighting now in vogue. An illuminant, pure and simple, should be placed well above the line of vision; in short, the location of the units of light should be such as to distribute the light in a manner more closely conforming to

nature. This means that the lamp should be properly located in the ceiling, and the light thrown downward.

Although it is possible to operate the Nernst lamp in any position, the present commercial form is designed to be hung in a vertical position so as to gain the advantages possessed by a downward distribution of light. The main features are alike in all lamps, and the construction of a one-glower lamp may be seen by referring to Figure 1. The assemblage of parts and electrical connections are shown diagrammatically in Figure 2. 1 and 2 are the terminal connections to the line. Following from 1 the first half of the heater circuit is through the heater to the cutout and then to the line at 2. The second path, or glower circuit, is through the glower, the ballast, and, finally, through the cutout coil, back to the line.

Besides the natural light distribution the Nernst lamp possesses many advantages which would tend to make it a very useful factor in the lighting field. Its efficiency is twice that of the ordin-

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SEP 26 1904

Cut Box

Page



Fig. 3.—How to Grip the Holder of a Nernst Lamp without Disturbing the Glowers.

ary incandescent lamp and fully equal to that of the best modern arc lamps. This feature, combined with the fact that the lamp is furnished in sizes corresponding in candle power to that of the single-burner Welsbach and four-burner gas arc, would seem to establish it as a strong electric competitor of the gas burners now in common use. The color or quality of the light is said to lie between the violet tint of the arc and the orange yellow of the incandescent; giving an effect which is the nearest approach to artificial sunlight. Under this light colors would naturally have their truest values, and it was due to this fact that the lamp was selected by the St. Louis Exposition authorities to illuminate their exhibits of fine arts.

While experience has shown that the Nernst lamp in the United States can (in the larger sizes) compete successfully with modern enclosed arcs, and that the smaller sizes are strong competitors of the ordinary incandescent electric, as well as the various gas lamps in existence, its champions do not claim that it is going to supplant any one of these older illuminants, but that it will create for itself a field of its own; and, by exciting a demand for more light, due to its brilliancy and economy, will tend to increase rather than decrease the use of other illuminants.

CANADA'S TRADE WITH MEXICO.

J. H. McLEOD, a successful business man in the City of Mexico, is to come to Ottawa soon and to remain in the city two weeks. He will confer with Dominion officials concerning trade promotion.

Lately what is known as the Canadian Commercial Club was organized at Mexico, its object being the promotion of trade between Mexico and Canada. Canadians living in many parts of the republic of Mexico, including several Ottawans, have been enrolled in the membership. There are now over one hundred members. Mr. McLeod is the president of the club and lately had this to say concerning the plans: "The object of the Canadian Commercial Club is, of course, to work in the interests of Canadian commerce. We will endeavor to import from Canada every pound of stuff that we can, and will aid in exporting from this country such products as are marketable in Canada. We expect that the Canadian Government will send a commissioner to Mexico and when he comes he will make his headquarters with the executive committee of our club. We are at present engaged in securing information concerning the commerce of Mexico, and will plan to divert as much as possible of this commerce to Canada. We feel that our organization will play an important part in the future commercial life of Mexico and Canada." — Ottawa Free Press.

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Type H. Transformers.

THE Canadian General Electric Co., Limited, Toronto, have issued a new booklet, "Some Facts About Type H Transformers," wherein is demonstrated the advantage of replacing old transformers with transformers having high insulation, low core loss, good regulation, and low and uniform temperature rise. This work is one that will be particularly interesting to managers of central stations, though all large users of electricity could read the work to advantage. It will be sent on application.

The Akon Chilian Mill.

The Wellman-Seaver-Morgan Co., Cleveland, O., have issued a catalogue giving full information regarding their "Akon Chilian Mill," for the wet grinding of metalliferous rock, the advantages of which are explained and illustrated in detail. Anyone interested in mining machinery could read this book to advantage.

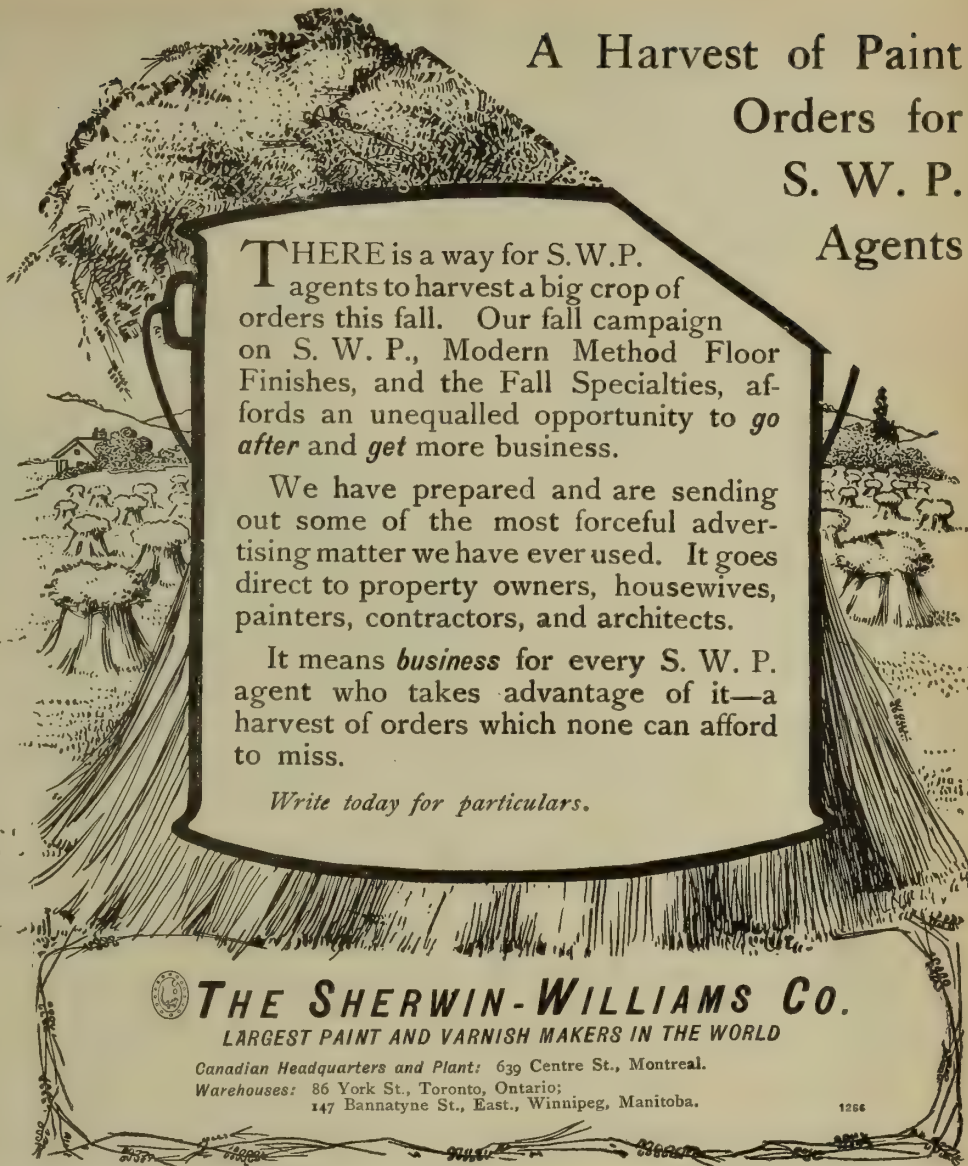
The Kelsey Generator.

The James Smart Mfg. Co., Limited, Brockville, Ont., have issued a dainty hanger, lithographed in tin, in strong colors, showing with excellent effect a sectional view of a Kelsey warm air generator for the home, school or church. This hanger is an attractive one and should be of great value to agents for this furnace in explaining the features which make the Kelsey such a superior heat producer. Any of the trade who have not secured one of these hangers should write for one.

The Omega Toggle.

The New Jersey Foundry & Machine Co., of New York, have just issued a neat booklet describing the "Omega" toggle. The toggle consists of two springs which are riveted on each end of the head and meet in the centre over the hole the screw passes through. The ends of the springs are punched out in a half circle, the four springs engaging the thread and body of the screw. Illustrations are given showing its use for plumbers, electricians, and others.

Lethbridge, B. C., is to have some splendid new railway buildings. A by-law will be submitted soon to the rate-payers to grant taxation exemption for 20 years to a 50 acre tract of land and



A Harvest of Paint
Orders for
S. W. P.
Agents

THERE is a way for S.W.P. agents to harvest a big crop of orders this fall. Our fall campaign on S. W. P., Modern Method Floor Finishes, and the Fall Specialties, affords an unequalled opportunity to go after and get more business.

We have prepared and are sending out some of the most forceful advertising matter we have ever used. It goes direct to property owners, housewives, painters, contractors, and architects.

It means *business* for every S. W. P. agent who takes advantage of it—a harvest of orders which none can afford to miss.

Write today for particulars.

THE SHERWIN-WILLIAMS CO.
LARGEST PAINT AND VARNISH MAKERS IN THE WORLD

Canadian Headquarters and Plant: 639 Centre St., Montreal.
Warehouses: 86 York St., Toronto, Ontario;
147 Bannatyne St., East., Winnipeg, Manitoba.

the improvements thereon. The negotiators are the C. P. R. and the Galt Railways. The intention is to erect a union brick and stone passenger depot, a 500 feet long freight shed, a ten stall round house and several miles of siding. The estimated cost is between \$50,000 and \$80,000.

SOME HINTS FOR THE RETAILER.

DON'T let business cares engross all your thoughts. Don't let the hunt after dollars make you mean, sordid and stingy. Don't leave your money for some one else to enjoy, but get some of the pleasure yourself by using it during your life to make others happy. It is the man with a big heart and an open pocketbook that grows and prospers; dollars come easier and life is made worth living.

The boys have to be looked after. There are many employers who think this is not worth while, but it is. It is acknowledged that the best salesmen

come from well-trained boys, and yet it is said that only about one boy out of ten proves a success and really merits promotion. Is this not often caused because too little attention is paid to the boys? The average American boy is restless, constantly looking for a change that will benefit him. Many times such an ambitious lad may be converted into a first-class salesman and the best of results be obtained, by the house employing him, by the exercise of a little judicious care and attention. The boys who are not worthy of that are poor stock to have around a store at any price.

The man who comes nearest demonstrating that he ought to occupy a place in an observation ward is the one who is constantly worrying. It is a silly, disagreeable habit, and moreover, it is a growing one. It is as hard to get out of as it is to break a child from sucking its thumb. The man who starts in to worry about business and

business perplexities always turns out a confirmed pessimist and makes himself disagreeable to himself, his family and associates. Don't worry. If you do your best every day that is all you can do, and if the heavens are going to fall you can't prop them up, but if you try you can get in a few more smiles and extract a little more enjoyment out of life before the smashup comes. Don't worry. Let the other fellow do it.

It is a bad idea to carry over a stock of seasonable goods. Have you any unsold refrigerators? If so you ought to get real busy and let the people know that you have got some bargains in that line for ready cash. Such a sale, even if you do not make a cent on it will help you in more ways than one. First, you will get rid of the stock and the trouble of storing and caring for it; second, you will have its cash value to use in your business; third, you will make friends and patrons, if you really give honest bargains. The woman who gets a refrigerator or a lawn mower or hammock from you at a bargain and realizes that she has benefited thereby, will not forget the place in a hurry. By all means clean out all the seasonable goods and do not think that the dry goods and department stores are alone entitled to hold bargain sales.—"The Hustler" in Hardware Reporter.

CANADIANS AND SOUTH AFRICAN TRADE.

GREAT interest is being taken at present in South African trade, and Hardware and Metal has received many inquiries from importers in that country. In fact, a list of importers is now in the office of Hardware and Metal, which will be gladly explained to inquirers. A special circular has been issued by shipping firms, interested in the Canadian-South African trade. These are Furness-Withy, and the Elder-Dempster Co., who, in a carefully worded letter, outline to prospective shippers the advantages Canadians enjoy in this market. The letter reads:

"You are doubtless aware of the recent changes in tariff regulations affecting goods the growth, produce or manufacture of Canada, when such goods are imported into the British South African colonies for consumption.

"The amended customs regulations above referred to, place shippers of Canadian goods at a decided advantage over others, inasmuch as the said regulations, which took effect July 1, 1904, besides placing a number of ar-

ticles on the free list, provide as follows:

"A rebate of customs duties shall be granted on any goods and articles the growth, produce or manufacture of Canada, imported therefrom into this colony for consumption therein to the extent following:

"In the case of goods and articles liable to customs duty under class I., II., or V., of schedule B, a rebate of 25 per cent. of any duty chargeable thereon at an ad valorem rate, but of no other duty; and,

"In the case of goods and articles liable under class III., of schedule B, to duty at an ad valorem rate of 21-2 per cent., a rebate of the whole of such duty."

"In this connection, we would take this opportunity of again calling your attention to the Canada-South Africa joint steamship service maintained by the undersigned; the steamers of which service sail at regular monthly intervals from Montreal, in Summer, and St. John, N.B., in Winter, for South African ports.

"We hand you herewith, sample forms

**ABSOLUTELY SAFE.
ACCIDENTAL DISCHARGE IMPOSSIBLE.**

**Hammer
the
Hammer**



WE PROVE OUR STATEMENT.

Made impossible by a patented safety lever,
found only on

IVER JOHNSON REVOLVERS

Our booklet "Shots" and latest fire arms catalog contain the whole story in a nut shell. Send for them.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

of necessary declarations, and trust to hear that this important reduction in duties on goods the growth, produce or manufacture of Canada, will enable you to materially increase your Canadian shipments, by the steamers of the Canada-South Africa joint service.

"The next proposed sailing is the Wyandotte, 18th October."

CARRIAGE MEN MEET.

AN incident of exhibition week in St. John, N. B., is the meeting of the Carriage & Wagon Manufacturers' Association of New Brunswick on Thursday. The object of the organization is to promote the prosperity of the carriage and wagon makers trade in this province and to maintain a uniform scale of prices, and for an interchange of views. Membership in the association is open to those engaged in the manufacture of wagons and carriages, for pleasure or freight.

The officers are:

President—B. L. Moore, Moore's Mills.
Vice-president—Patrick McGinn, Fredericton.
Secretary-treasurer—W. L. McFarlane, Nashwaaksis.

Executive—A. L. Duplissie, Fredericton Junction; Chas. Staples, Burt's Corner.

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Only wholesale

Sample Room at 21 SCOTT STREET, Telephone Main 4056.

Telephone:—Office, Park 1584

(Where orders may be left if not convenient to visit our Warehouse at Parkdale.)

Telephone:—Warehouse, Park 1585

COW CHAINS

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Stall Fixtures.

Stall Fixtures.

SEP 24 1904

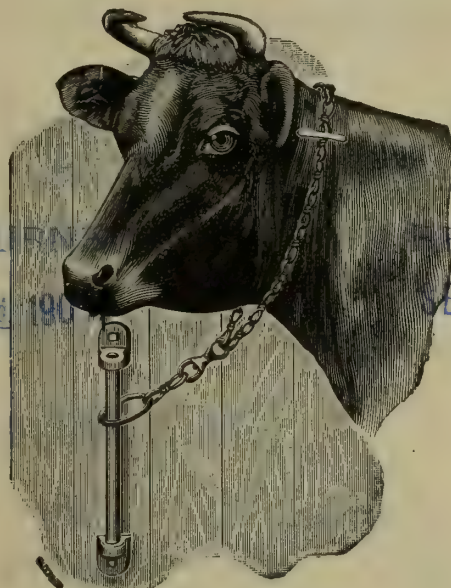
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Close Rings

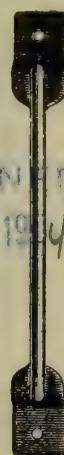


Forged.



Special Stall Fixture Chains.

Three Chain.



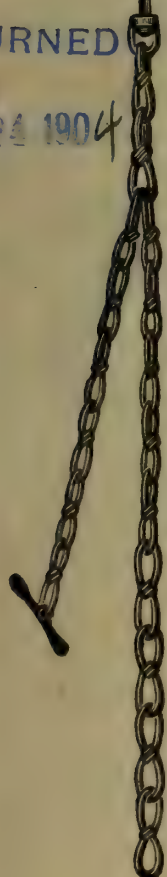
Stamped Steel.

Open Rings.



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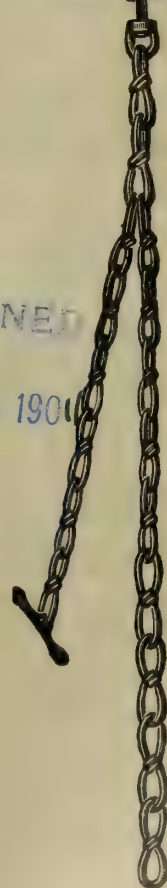
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H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

Our prices are right.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

We Ship Promptly.

Made in Canada

The steel rail mill of
The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.
is now in operation and turning out

A. S. C. E.
Standard
Section

Steel Rails

of
Highest
Quality

Your specification will have our best attention.

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Office of HARDWARE AND METAL,

232 McGill Street.

Montreal, Sept. 22, 1904.

DEALERS on all sides report an increasing business in nearly all lines of machinery during the present week. The looked for Fall trade seems to have opened up at last and in a satisfactory volume. Inquiries are more numerous than at any time during the Summer, which gives every indication of a large Fall business.

Machine tools are particularly active and numerous orders for these are reported. A few engines are being installed and several boilers. Wood working machinery is in good demand. Electrical machinery and apparatus continue steady with slightly increased sales.

Ontario.

Office of HARDWARE AND METAL,

10 Front street east,

Toronto, Sept. 23, 1904.

MACHINERY houses report continued activity in the demand for all kinds of machinery. Several of the large iron-working manufacturers have been in the market for machine tools and a fair trade in wood-working machines continues. The sale of engineer's supplies, etc., keeps active.

Electrical machinery continues in active demand, while a good trade in gasoline engines, particularly of the smaller sizes, is noted. The trade in boilers and engines is normal.

Treatment of Steel in Large Masses.

ONE of the papers read before the Iron & Steel Institute in England, by Cosmo Johns, deals with the production and thermal treatment of steel in large masses. The writer of the paper emphasizes the fact that there is a great difference in dealing with the metal in large masses, or in laboratory experiments, and he desires to show the difference between the two. For instance, a railway axle weighing 500 lbs. offers a mass out of all proportion to the small specimens

experimented upon under laboratory conditions; and yet axles are about the smallest of the steel products of the River Don Works, Sheffield, with which the author is connected. From an axle weighing 500 lbs. to a marine shaft 24 inches external diameter and 86 feet in length is a stride that at once emphasizes these conditions. To ensure the homogeneity of such a mass is alone a problem; whilst to heat it equally to a predetermined temperature and then to cool it at a certain rate are operations that tax the resources of the metallurgical engineer. Further, time is an important factor in thermal treatment, for if a small specimen and a large forging, both of the same composition, be subjected to the same heat treatment, the resulting structures will be very different. One of the first lessons learnt in works practice is that heat treatment eminently suitable for a small specimen as determined by the laboratory requires careful revision and a consideration of the new factors of "time" and "mass" before satisfactory results are obtained in the works. From a manufacturing point of view the specification must be added to time and mass; and these three factors present the chief differences between works and laboratory practice. The methods of manufacture and special products of the River Don Works are described. For these products chemical purity is essential, and no difficulty is found in regularly obtaining contents of sulphur and phosphorus under 0.035 per cent. The danger of segregation, whilst always present, may be largely minimized by correct designs and starting with initially pure materials. Before casting, the steel should be "well killed;" it should teem quietly and remain still and limpid in the molds. Any attempt to secure this by large additions of deoxidizers to the ladle will result in variation in the composition of the steel; whilst there will be the further difficulty that the oxides formed have not time to rise to the surface of ingot or mold. The importance of casting in open molds with suitably designed feeding-heads is also emphasized, and the author advises no attempt by extraneous pressure to compress the fluid steel, for such compression serves only to mask the defects of

bad melting by diminishing the volume of blowholes which, with good melting, should not have existed.

Production of Metals in United States.

IN the year 1902 the total value of the metalliferous product of the United States was \$642,258,584. Iron is easily first, the output being valued at \$372,775,000. Next in importance comes gold, with a production valued at \$80,000,000, closely followed by copper at \$76,563,954, this value being less than that of the preceding year, although the tonnage was greater. The value of silver produced in 1902 was \$29,415,000, of lead \$22,140,000, and of zinc \$14,625,596. The United States leads the world in the production of iron, copper and lead.

The United States now furnishes about 28 per cent. of the lead of the world and 26 per cent. of the spelter, besides a considerable amount of zinc oxide.

Over one-third of all the gold mined in the United States comes from the southern division of the Rocky Mountains, chiefly from Colorado, which produces more gold than any other state. Alaska supplies about 10 per cent. of the total gold output of the United States.—Mining Magazine.

Speed of Woodworking Machinery.

In connection with the proper speed for running wood working machinery, "Woodworker" states that men get it into their heads that one cannot run this class of machinery too fast, and so speed up their saws and planers to the last limit. This is probably the poorest kind of policy. Saws running above a normal speed will not run as easily, nor do as good work, as at much lower speeds. If anyone does not think so let him take a common bench saw, speed it up and feed it by hand himself. He will soon find that his stock pushes hard. Then he concludes that the saw is dull. After filing he tries it again, with the same result. The trouble is that one cut follows the other too closely and glazes it over. Every wood working machine shows the same result, following too high a speed. There is a normal speed for saws and planers.

THE FITNESS OF THE STEAM TURBINE FOR HEAVY POWER SERVICE.

By J. R. Bibbins.

THERE are at present few subjects productive of more discussion in the world of engineering than the comparative merits of gas engines, steam engines, and steam turbines. These, together with the hydraulic turbine, constitute our entire stock of prime movers. Each has more or less clearly defined fields of usefulness which,

tious engineer feels compelled to supersede it by "the good old reliable" even though less efficient engine. A glance at the present extent of the turbine industry reveals a development that at once carries conviction as to the merits of this ideal form of motor. The industry practically originated with the Hon. Charles A. Parsons, who brought out

was begun in 1894, and, in spite of tremendous opposition from engine builders, Mr. Parsons early in 1903 had succeeded in establishing his turbine to the extent of 83,000 h. p., which has probably been increased to nearly 100,000 up to the present time.

Up to the time of its introduction by Parsons and DeLaval, the utilization of steam for power work had been entirely through direct expansion in the cylinder of the reciprocating engine. The idea of employing the kinetic energy of a steam jet was not new, but not until demonstrated by Zeuner was the fact fully appreciated that the energy available in a properly directed steam jet is equal to that to be derived from direct expansion in a piston engine, provided that in both cases the steam expanded through the same range of temperature and pressure. This is, of course, a purely theoretical relation, and is only approximated in practice. In many respects the steam turbine presents a direct parallel to the hydraulic turbine. Both employ nozzles or guide vanes to direct the moving fluid against rotating vanes mounted upon the periphery of a supporting spider, these vanes being in such form and position as to convert the greatest percentage of the inherent energy of the fluid into useful torque on the shaft. A radical difference, however, between the two forms of turbines lies in the characteristics of their respective working fluids, one being expansive and the other practically non-expansive. In the steam turbine two energy conversions take place: first, heat energy is expended in expansion and in producing high steam velocity; second, kinetic energy of the steam jet is transformed into useful work through impulse, reaction or both. The second conversion alone presents a parallel case to that of the hydraulic turbine. Water, during its discharge through a turbine, remains at practically constant volume, but that of steam increases rapidly in expanding from boiler to condenser pressure; for instance, one cubic foot of saturated steam at 200 lbs. pres-

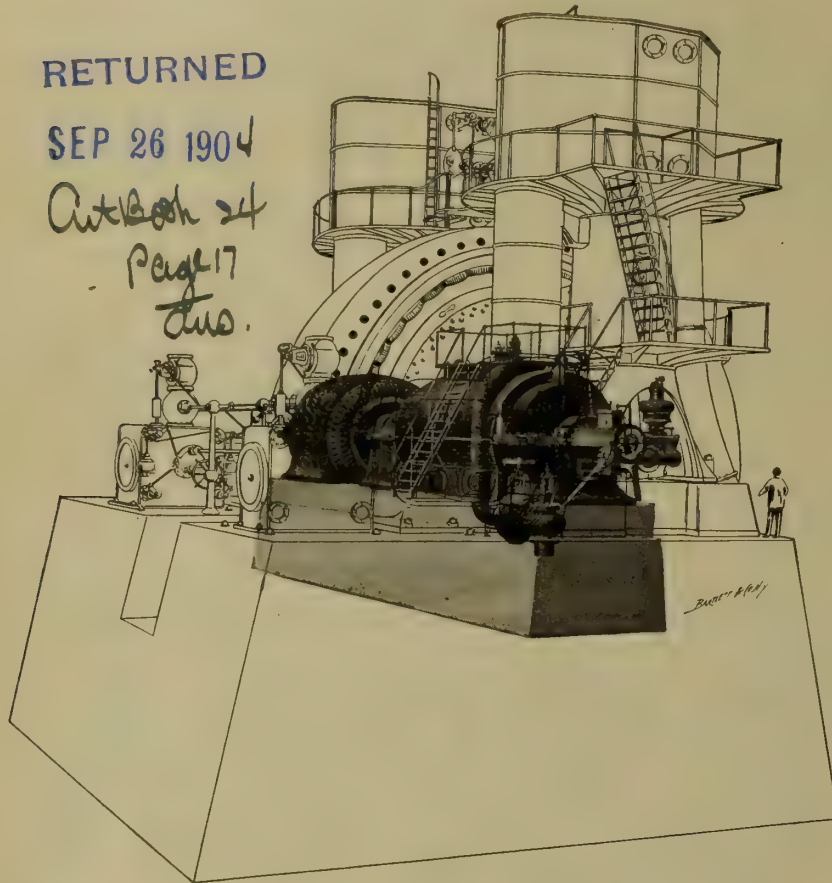


Fig. 2—Comparative size of 5,000 k.w. Engine and Turbine Generating Units.

however, unfortunately overlap. Leaving out of consideration the limited application of the water turbine, the battle royal is on in earnest between the gas engine, the steam turbine and the reciprocating steam engine which for nearly two centuries has held undisputed sway in the field of power production on a large scale. In recent discussions before technical societies on the general subject in hand, the keynote of thought and criticism has been the reliability and fitness of the steam turbine for the general and specific duties for which it is advocated by its supporters. Operative efficiency has for the moment been accorded a position of secondary importance. This is natural and pertinent. However efficient a prime mover, if, through general complications, doubt exists as to its ability to perform its duties continuously, the cau-

his first experimental machine in 1884. Within four years turbines aggregating 4,000 h. p. capacity, all of the non-con-

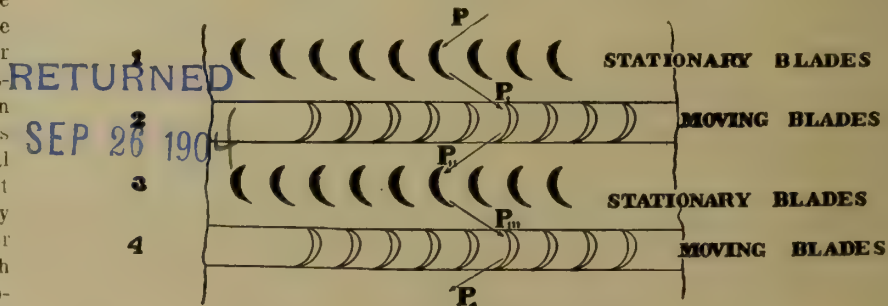


Fig. 1—Arrangement of Vanes.

densing type, were at work. By 1902 eight hundred turbines had been sold, aggregating about 200,000 h. p., the largest machine being of 3,000 h. p. nominal rated capacity. Marine wo-

sure expands 154 times to 28 inches vacuum and 340 times to 29 inches vacuum. Further, by reason of the lower density of steam, high velocities must be dealt with in order to obtain best

theoretical efficiency. The general principles of design of the hydraulic turbine apply to the steam turbine as well. Thus all surfaces coming in contact with the working fluid should be so designed as to minimize surface friction and avoid eddy currents. The jet should be so guided as to meet the vanes without shock and no sharp angular deflections should occur during its change of direction. In the impulse turbine of which the Pelton and DeLaval are representative the proper velocity of vanes for maximum efficiency should be half that of the issuing jet. In the reaction type it should be equal to that of the deflected jet. Thus, in the DeLaval turbine, the bucket speed should be about 2,000 feet per second for best efficiency under high vacuum. This enormous speed, however, imposes such severe stresses in the metal of the disc that in practice lower speeds are of necessity employed. To the Swedish engineer, DeLaval, belongs the credit of introducing the ingenious invergent nozzle as a means of obtaining full expansion of steam in suitable form for projecting against a rotating vane wheel. As the increasing diameter of the nozzle provides room for further expansion the jet velocity increases and the pressure and temperature fall through the entire range from boiler to condenser. This occurs within a length of a few inches. The expansion is nearly adiabatic and the temperature at each section of the nozzle remains approximately constant.

All turbines make use of the principle in one form or another. The DeLaval construction still retains the high disc speed, which ranges from 10,000 to 30,000 r. p. m., depending upon the size. This necessitates a 10 to 1 reduction gear. Parsons, however, from the first aimed at speeds sufficiently low to provide for direct connection of the turbine to generating and other machinery without the use of gearing. This result he secured through the use of the multiple expansion or stage principle, an invention fully as remarkable in its effect upon the industry as the brilliant inventions of the divergent nozzle and flexible shaft by DeLaval. He instituted the arrangement of vanes (see illustration) which replaces the expanding nozzle. This leads to an extension of the process ad infinitum, resulting in a fractional abstraction of energy pressure and velocity by a number of vane wheels mounted in series upon a single shaft. This principle distinguishes the Parsons or parallel flow turbine from the simple impulse type and secures commercial speeds of rotation without the use of reduction gearing. No nozzles are employed, as the functions of the nozzles are performed by the vanes.

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1 Waterous Side Crank Engine, cylinders 12 x 14 in.; 4 1/2 in. shaft.

1 Fly Wheel Pulley, 18-in. face, 6-in. dia.; 1 Driving Pulley, 12-in. face, 36-in. dia.; 1 Driving Pulley, 8-in. face, 26-in. dia., bore 5 1/2 in.; bore bushed to 4 1/2 attached, out-board bearing.

1 Return Tubular Boiler, 52-in. dia., 14 ft. long, 52 1/2-in. tubes.

1 Shaft, 2-in. dia., 9 ft. long; 1 pulley, 5 1/2-in. face, 6-in. dia., wood; 1 pulley 6 1/2-in. face, 10 3/4-in. dia., iron attached, 2 bearings.

1 Shaft, 2-in. dia., 37 in. long; 1 Pulley, 5 1/2 x 24 in.; 1 Pulley, 6 1/2 x 10 1/2 in., attached, 20 bearings.

1 Shaft, 2 1/2 in. x 15 ft. 10 in.; 1 Cone Friction Pulley, wood, 10 in. thick, 13 1/2 in. small dia., 32 in. large dia.; 1 Pulley, 11 x 30 in., wood; 1 Pulley, 4 x 10 in., wood; 1 Pulley, 7 x 48 in., iron attached, 3 bearings.

1 Shaft, 2 1/2 in. x 7 ft. 11 in.; 1 Cone Friction Pulley, iron, 7 1/2 in. thick, 14 in. small dia., 28 1/2 in. large dia.; 1 Pulley, 10 x 24 in., iron attached, 2 bearings; 1 Eccentric, for throwing frictions in and out of gear.

1 Shaft, 1 1/2 in. x 9 ft.; 1 Friction Pulley, 8 x 10 in., winding wood drum, 6 in. x 4 ft. 6 in., 4 in. flanges, attached, 2 bearings.

1 Shaft, 1 1/2 in. x 5 ft.; 1 wood pulley, 10 x 76 in., 2 bearings attached.

1 Belt Tightener Pulley, 16 x 20 in., in swinging frame, 1 1/4-in. shaft, 2 bearings.

1 Shaft, 2 1/2 in. x 9 ft.; 1 drum, 10 in. x 3 ft. 7 in., 12 1/2 in. flanges; 1 pulley, 7 in. x 45 in., wood, 2 bearings attached.

1 Rogers Pat. Emery Wheel, saw sharpening machine, manufactured by Hart Emery Wheel Company, Hamilton, Ont., takes 84-in. saw; counter shaft and pulleys for same.

1 Piece of Shafting, 4 3/4 in. x 10 ft. 2 in.

1 14-in. Edging Saw.

1 49-in. Circular Saw.

1 52-in. " "

1 60-in. " " inset teeth.

1 28-in. Slab Saw on arbor and frame.

9 Slab Rollers, iron, 20 x 10 in. dia. in bearings, 2-in. shafts.

1 Edging Table, 15 ft. long x 17 1/2 in. wide, on iron wheels, and bed with iron rails, 32 ft. long.

1 3/4-in. Saw Arbor, in frame, also friction pulleys, levers and gear for operating log carriage, complete.

1 Log Carriage Rack, driven on iron rails, complete.

1 Pulley, 6 x 18 in., 2-in. bore.

1 Paper Pulley, 6-in. face, 11 1/2 in. dia., 13 in. dia. over flanges, 2-in. bore.

46 ft. of new Main Belting Co.'s Leviathan Belt, 14 in. wide, 1/2 in. thick.

Also a lot of second-hand belting, some of which is in fair condition. The machinery is in good condition. There is no smoke stack. Boiler front and grates in good condition; boiler in brick setting. Write regarding above to W. H. COWELL, HARDWARE AND METAL, Toronto.

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Turning now to the general construction of the Westinghouse-Parsons turbine, a section of which is shown, we observe three essential elements—the rotor, the stator, and the balancing pistons. The rotor consists of a cylinder of three or more drums of increasing diameter, upon the periphery of each of which are mounted numerous

chanical friction. Leakage of steam past the piston is prevented by deep grooves in the periphery, which inter-

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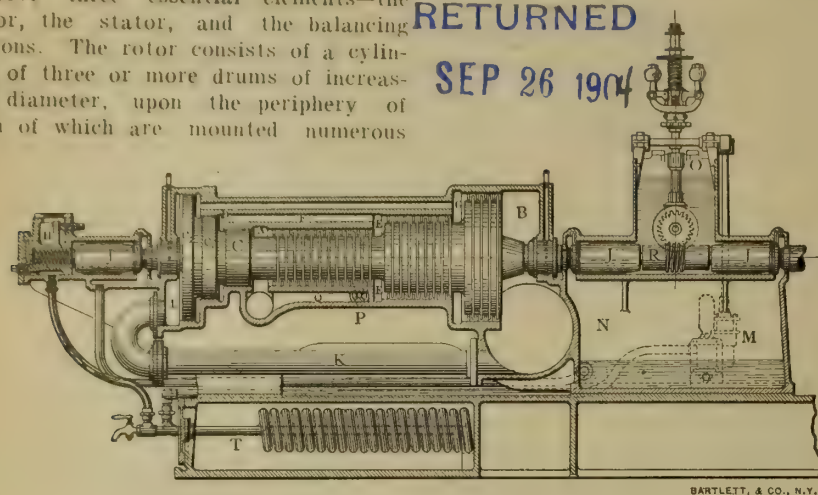


Fig. 3—Section of a Typical Turbine.

rings of radial vanes. The stator comprises a split casing of interior proportions conforming to those of the rotating cylinder. The interior walls of the casing are studded with rows of stationary radial blades corresponding to those on the moving cylinder but assembled with a reverse pitch. High pressure steam enters the turbine through the annular orifice A, expanding to the right throughout the several stages to the exhaust B. The rotating balance pistons designated by the letter C, are equal in number to the number of drums, and each piston is of such diameter that the axial thrust resulting from the impact of the steam upon the blades of any drum is exactly balanced by corresponding pressure against the pistons. These pressures are at all times equalized by means of the ports F and the pipe K. It will be observed that the balancing of the rotating element is entirely independent of the absolute or relative pressures in the various stages, so that the adjustment bearing H is entirely relieved of axial thrusts. Its only function is to preserve the mechanical clearances between

pose so devious a path for the steam as to render loss from this source quite inappreciable.

The most vital parts of the turbine

economy of the machine. The form of blade used in the Westinghouse-Parsons turbine is the result of both theory and extensive experiment. They are usually made of a special bronze cold drawn, of tensile strength averaging 75,000 to 80,000 lbs. per square inch, with 20 per cent. to 30 per cent. elongation. This material is drawn out into long strips and the blades are then sawed off to proper lengths. They are assembled by a caulking process in grooves turned in the steam surfaces of rotor and stator. This method has proven so effective that the force required to pull out the blades exceeds the elastic limit of the material. It also greatly facilitates repairs, should such ever prove necessary. In direct contrast to this simple form of blade mount is that employing milled buckets on the periphery of the turbine wheels. Accidents are of course unavoidable in the most perfect mechanisms, but should such occur in the Parsons form of turbine the damage is generally quite local a few rows of blades only being affected.

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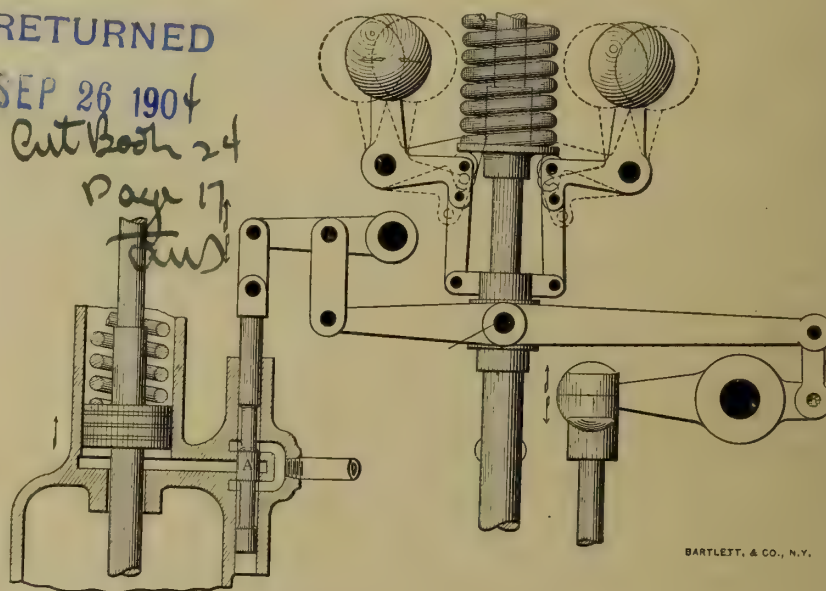


Fig. 4—Arrangement of Governor Mechanism.

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Fig. 5—5,500 k.w. Steam Turbine.

moving and stationary blades. The balance pistons revolve within the casing with a close fit but without me-

are the steam vanes or blades, as upon their precise curvature and arrangement depends in a large measure the

The method of regulating the speed of the turbine comprises two unique features; one in mechanism, the other in theory. Fig. 4 shows diagrammatically the arrangement of the governor mechanism. The governor is of the purely centrifugal type with bell crank levers swung on knife edges and resisted by a spiral spring, the pressure of which may be adjusted by the knurled tension nut. The spring part of the mechanism is mounted between ball bearings and may be brought to rest while the turbine is running. By increasing the spring tension the speed of the turbine is increased and vice versa. This affords a means of synchronizing two alternating current generators for parallel operation and for accurately distributing the

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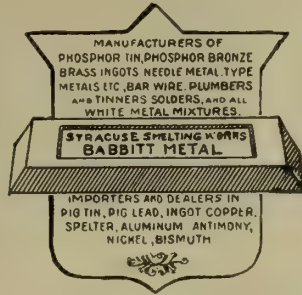
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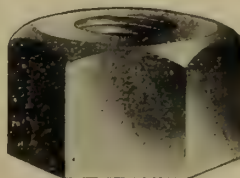
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load after synchronizing. The main admission valve is actuated by an auxiliary piston B, which is in turn moved by the pilot valve A through the agency of high pressure steam admitted through the ports shown. D and E are fixed points, F a floating fulcrum the position of which is determined by the position of the governor balls. Reciprocating motion from an eccentric driven by a shaft is transmitted to the point C. This reciprocating motion is transmitted to valve A, and finally to the main admission valve. High pressure steam is thus admitted to the turbine in short puffs with the frequency of about 150 strokes per minute. The function of the governor is to vary the plane of oscillation of the pilot valve A, thus varying the period of steam admission to the turbine in proportion to the load. "A" also operates as a safety stop: a large movement either way from mid position results in shutting off steam to the admission valve. Thus the turbine will come to rest should a heavy short circuit occur or the governor mechanism break.

With speeds as high as 3,600 r. p. m., it becomes necessary to provide flexibility to absorb vibrations occurring while the turbine is passing its critical speed. The bearing used in turbines under 1,000 k. w. capacity consists of a nest of loosely fitted metallic sleeves surrounding the shaft and resting in a self-aligning seat in the pedestal. Oil circulates between the sleeves and by capillary action fluid cushions are formed which restrain vibration and at the same time give sufficient flexibility to allow the shaft to revolve about its gravity instead of its geometric axis. The shaft is, therefore, built as rigidly as desirable and the crystallization experienced in turbines employing flexible shafts is avoided. In turbines above 1,000 k. w. capacity a solid split self-aligning journal is used, as the speeds are so low as not to require the flexible journal. All bearing surfaces are sufficient to render forced lubrication unnecessary, as usually understood to mean, oil under high pressure, i. e., pressure of several hundred pounds per square inch; and as the weight of the shaft is carried by oil films practically no wear is experienced. This is evident from the fact that after several years operation a turbine bearing after the dismantling of the machine showed the original tool marks upon the inner shell. In furnishing the oil supply for the turbine bearings a small plunger pump driven by the turbine itself is employed. Referring again to the sectional view, this pump is shown at M, and circulates oil through a closed system comprising in the order of their arrangement: pump, oil collar bearings and reservoirs O and N. The pressure impressed

upon the oil films at the bearings is equivalent to a static head of one to three feet, no oil under high pressure being used in the turbine. It is hardly necessary to emphasize the utter simplicity of this system of lubrication and the soundness of engineering judgment behind it which avoids the hazard incident to high pressure oiling systems in the hands of careless or incompetent operators.

Liquid Air and Metals.

THE commercial production of liquid air is a very important discovery and the future question of economy in motive power may be intimately associated with this liquid. Compressed air at pressures ranging from 1,000 pounds upward is conducted from an air receiver through a small pipe, is refrigerated to expel its moisture, and is then conducted into the apparatus which liquifies it completely without the use of chemicals of any kind, and it flows from this apparatus in a stream about the size of a lead pencil (in the apparatus of Linde) into a glass insulated receptacle, containing about two gallons. This receptacle was filled in very short time. Of course being in an open vessel, liquid air has no pressure but its temperature is approximately -315 degrees F., or 375 degrees below the atmosphere at 60 degrees F. Inasmuch as it boils rapidly on the surface, owing to its absorption of heat from the atmosphere, it looks like milk on the surface, but upon dipping some of it out in a glass and observing its color through the glass it has very much the appearance of ordinary water. Its temperature is very deceptive, for as it runs from the condenser one may allow it to trickle over the fingers for a short space of time and it appears to have the atmospheric temperature. The truth, however, of the matter is that it does not come in contact with the fingers at all; the hand being something like 480 degrees warmer than the liquid it throws the liquid into a spheroidal state and interposes between it and the fingers a film of atmospheric air. The sensation is very much like pushing one's hand into a bag of feathers or into a mercury bath, allowing, of course, for the difference in weight between the mercury and the liquid air. If, however, you immerse your hand in the liquid a sufficient time to establish a contact, the flesh would be burned the same as if it were exposed to 440 degrees of heat, measured above the atmospheric temperature.

Air is the vapor of a liquid, and acts in its properties like the vapor of other liquids. Each of its constituents, nitrogen, oxygen, carbon dioxide, argon, and helium, is also the vapor of a liquid.

When air is liquified and allowed to boil off at atmospheric pressure the nitrogen boils off faster than the oxygen and the resulting free air becomes richer in oxygen. The color of liquid air is light blue.

Its use in physical experiments has been a most important one in developing the action of intense cold on the tenacity of metals, in chemical reaction and magnetic effect under temperatures approaching that of interplanetary space. The lowest temperature as yet artificially produced was obtained in the experiments of Professors Dewar and Wroblewski by the evaporation of liquid air by which a temperature of -346 degrees F. was reached, or within 115 degrees of the reputed absolute zero; beyond which it is claimed molecular vibration ceases and the chemical action between all substances is in abeyance. In physical investigation the convenience for obtaining and maintaining intensely low temperatures for a considerable time, or sufficient for the manipulation of experiments in physical phenomena, is only of recent date, and this has opened the way for the most noted expansion in the paths of physical research.

Pure metals, as stated by Dewar, seem to have no electrical resistance at temperatures near absolute zero. The electric conductivity of carbon decreases with low temperatures and increases with high ones; at the temperature of the electric arc it appears to have no resistance. Thus with steel, iron, copper, brass, German silver, gold, silver, tin and lead, the tenacity has been found to be largely increased from 60 degrees F. to -295 degrees F., mostly equal to 50 per cent., and in the case of iron to more than 100 per cent.; while the highly crystalline metals, zinc, bismuth and antimony, lose half their strength at the lowest temperature. A single incident is the increase in the tensile strength of the fusible alloy of tin, lead and bismuth of 300 per cent. at this low temperature. The behavior of a magnet at the temperature of boiling liquid air has been found to be somewhat erratic owing probably to the difficulties attending such experiments; but with final results of an increase of from 30 to 50 per cent. of its magnetic strength by the extreme cooling process. If a test tube of $1\frac{1}{2}$ inches diameter, having a couple of pounds of mercury in the bottom, is immersed in liquid air the mercury will be frozen solid in a few seconds and may be hammered out and otherwise manipulated the same as lead. An alcohol thermometer of large size will be frozen instantly upon being immersed in this liquid. An idea of the tremendously low range of temperature may be gathered from the fact that it will take sev-

eral minutes to thaw out the small bulb of this thermometer by covering it with the palm of the hand. A most curiously physical phenomenon is shown in the condition of meats at the extreme low temperature derived from the evaporation of liquid air. Mutton becomes so extremely hard that it rings like porcelain when struck with an iron rod, and may be crushed into a fine dry powder with a hammer, in which muscle, fat and bone are undistinguishable, but mingled as dry sand.

A tablespoonful of liquid air poured on about a fluid ounce of whiskey will freeze it at once into flat scales, giving the whole the appearance and color of cyanide of potassium. This may be emptied out on a table and will remain frozen in that condition for fully five minutes. One thing that impresses one is that while all molecular motion is practically arrested at this temperature the odor is perfectly distinct, showing that these particles which stimulate the sense of smell are active and independent of the temperature. A teacupful of liquid air poured on top of a tank of cold water goes into its spheroidal state instantly in globules of about half the size of an ordinary marble which fly around on the surface leaving a trail of white vapor behind them. A handkerchief of either silk, linen or cotton, saturated with the liquid will be charred and destroyed just the same as if it were put in an oven and browned though no change of color is apparent. Its evaporation is quite slow, and it may be carried about for a number of hours in an open vessel without entirely disappearing. Absolute alcohol solidifies at 203 degrees F., becoming viscous before solidification like a heavy oil in appearance. Professor Dewar has found that liquid air, when reduced to its lowest attainable temperature by boiling under a vacuum becomes apparently solid or frozen; and that when the solid mass is placed in a strong magnetic field oxygen is drawn out toward the poles of the magnet in a liquid form, showing that nitrogen may be frozen at about 346 degrees F. The temperature for freezing liquid oxygen has not yet been reached. The evaporation of liquid air greatly increases its proportion of oxygen and the liquid becomes a vigorous element in combustion even to explosive violence. Any fibrous combustible material saturated with it burns with explosive violence. When cotton fibre is wet with oil and with concentrated liquid air and confined in an iron tube or blasting hole it explodes on firing with all the force of dynamite.

Ratte & Payment, general merchants, St. Anne De Beaupre, have dissolved partnership.

New Carbon Compound.

JOHN C. COVERT, U. S. Consul, Lyons, France, reports that at a recent meeting of the Academy of Sciences of France, held at Paris, M. Henri Moissan presented a paper concerning the preparation and characteristics of a new carbon compound containing molybdenum. This compound is obtained by heating charcoal with melted molybdenum and aluminum in an electric furnace. The resultant metallic mass is treated with a concentrated solution of potash, and needles of well-defined crystals of the new carbon compound are obtained.

The substance is very hard, is hardly attacked by acids other than nitric, and is not decomposed by water or steam at a temperature below 600 degrees C. It resembles the carburet of tungsten, already known, which is not considered surprising, as the metals tungsten and molybdenum are much alike. It is thought that this new compound may play a role in molybdenum steels.

The method of preparation shows that even at a rather high temperature (that of boiling aluminum), a molybdenum compound is obtained which contains twice as much carbon as the compounds formed at the highest heat obtainable in the electric furnace.

Ontario Lantern and Lamp Co.'s Fire.

The above company are announcing this week to their customers that their losses in connection with their fire (to which reference was made in last issue of Hardware and Metal) have been adjusted and that the portions of their buildings which were damaged are being repaired very rapidly. Mr. Grose informed Hardware and Metal on Wednes-

day that the incandescent lamp department was not damaged to any extent, and as a new motor has been installed that part of the factory is now running. The company have therefore advised the general electric trade that they are able to fill orders at once. It is expected that in two weeks time they will be in a position to fill orders for lanterns, lamp burners and similar goods.

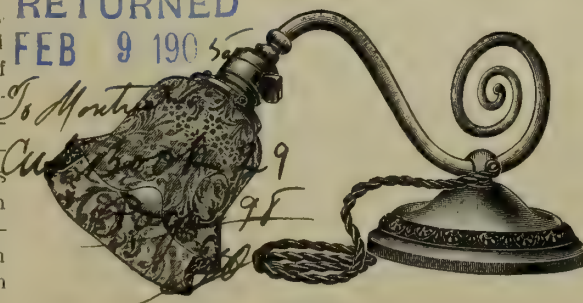
Handle Novelties.

AS has been pointed out in these columns from time to time, there are innumerable novelties in the electrical line which it would pay the hardware dealer to handle more extensively. They constitute a line of goods which the merchant is not apt to be asked for if he does not carry them in stock, but which would sell readily if properly displayed and persistently pushed. Moreover, the investment required is very small and the profits to be obtained are reasonably large. Hardware and Metal has persistently advocated in season and out of season the addition of profitable side lines to the ordinary stock in trade of the hardware store. It has advocated it because it recognizes that profits on staples have been cut to almost nothing, and if money is to be made in the hardware store, it must be made from these side lines. There is no line from which more profitable results can be obtained than from electrical novelties.

A study of the novelty catalogues and advertisements of leading supply houses would be a revelation to many hardware merchants who have not given this line proper attention. The merchant who is on the watch for profitable opportunities to increase his trade will look into the matter and no longer allow the mail-order houses to monopolize this business.

Electric Light and Gas Portables

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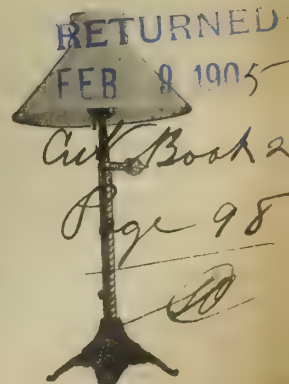
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THE WESTERN FAIR AT LONDON

NOTWITHSTANDING the unfavorable character of the weather, the crowds that daily thronged the exhibition buildings and grounds proved that the Western Fair had lost none of its popularity. It was unfortunate that Wednesday, when a big attendance of rural visitors was expected, turned out both wet and cold, and indeed very little warm weather was experienced during the entire run of the fair.

The Manufacturers Building was, of course, the principal attraction, and while some of the exhibits that have been prominent in previous years were

ant and growing industries, was somewhat scantily represented. London is lacking neither in brains nor industrial enterprise. It is a fair city, the centre of a rich and prosperous district, and many of its sons have risen to high positions in public life and in public esteem. Yet the stranger who visited the Western Fair (and there were thousands present from every part of the Dominion, from the States and from abroad, both distinguished and obscure) would almost certainly carry away the impression that, as a manufacturing centre the City of London was of little account. Surely there is need for a little more enterprise and patriot-

cessories of the farm, but no doubt the management made the best of the situation. Before long it is to be hoped a new building will be devoted exclusively to this important and rapidly growing industry.

It is only necessary to add that the amusements afforded by the midway were of the usual kind and showed no falling off in popularity. A word of praise is due to the management for the really excellent entertainment they provided in front of the grand stand. There was nothing hackneyed or "stale" in the performances of the various artists, and they kept the attention of the vast audiences from start to finish. The fireworks display was of the best and went off without a hitch.

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Exhibit of Hobbs Mirror Plate Works—Western Fair, London.

absent the displays of the various manufacturers were, taken as a whole, of a high order and evinced both good taste and painstaking care. Without making invidious comparisons it may be said that perhaps the piano industry had the most complete representation, the exhibits being both numerous and of a high standard of excellence. Soap, too, was much in evidence, and too much credit cannot be awarded to the exhibitors of this necessary article for the originality and beauty of their respective displays.

Looking around the Manufacturers Building one could not but feel that the City of London itself, with its import-

ism in this matter on the part of local manufacturers. It was a matter of general comment that the cigar industry (in respect of which the City of London ranks second in importance in the Dominion) had but one representative, while the biscuit industry had no representative at all.

The Machinery Hall was, of course, a strong drawing card, and contained a good representative display chiefly of farming machinery and agricultural implements. It was a little unfortunate, perhaps, that the stove exhibits should have been placed in the wing of this building alongside of a miscellaneous display of implements and other ac-

Hobbs Mfg. Co., Limited.

A unique exhibition was the display of art glass by the Hobbs Mfg. Co., Limited, of London. The exhibit was advantageously situated in the south-east corner of the Manufacturers Building, where an ample volume of light showed up the various beautiful designs in art glass to perfection.

This company make a specialty of art glass, electro glazed, and also set in heavy metal bar. The latter is intended to give additional strength and durability as compared with glass set in ordinary lead. The process is one which requires a special plant, and the company have lately installed at great expense an up-to-date plant which enables them to turn out the glass with greater despatch and exquisite finish.

Another line that they are paying considerable attention to is the mitred or cut plate glass, in the manufacture of which the greatest skill and care are required. The company is the only one west of Toronto that is making this species of glass.

The company also carry a very heavy stock of window glass, and also all kinds of fancy and figured glass for building purposes.

The Hyatt Mfg. Co.

An exhibit that attracted great interest on account of its novelty was the display of Hyatt's Brilliant Lamp Heaters, which was situated in the gallery of the Manufacturers Building. The decorations were in red, white and blue, varied with some yellow bunting.

Hyatt's Brilliant Lamp Heater was placed on the market a short time ago, and the company are well pleased with

the way in which it has been received by the public. They are experiencing a steadily growing demand. The company claim that their lamp heater is the only one that can be left burning

prominent was the Walker Pilot steel range, which the company claims is the most up-to-date on the market. Among heating stoves the "Walker Oak" with magazine was the most noticeable. This

illustrates the action of the electric spark within the cylinder. They also use a float feed carburator which gives a uniform supply of gasoline to the engine and greatly increases its power.

The company also exhibited a pedestal emery stand that they have recently put on the market. The stand is fitted with $1\frac{1}{4}$ inch shaft and 6 inch bearings, which they claim makes a very steady running wheel.

Wortman & Ward Mfg. Co.

By common consent one of the most complete and interesting displays was that of the Wortman & Ward Mfg. Co., of London. Among the numerous lines exhibited may be mentioned windmill and hand pumps, washers, extension ladders, step ladders, and a full line of utensils for the dairy. The "Royal" ball bearing washer which the company brought out about a month ago attracted considerable attention.

Worthington Stock Food Co.

The Worthington Drug Co., had an excellent display of their stock food in the Agricultural Building. It was built up in very artistic fashion the background being composed of five tiers of 50 and 25-pound pails. In front of these were three pyramids of tins of McDougall's sheep dip for which the Worth-



Exhibit of Hyatt's Brilliant Lamp Heater—Western Fair, London.

all night with perfect safety. Its utility in the nursery and sickroom is too obvious to require pointing out. For all occasions where hot water, hot milk, tea, coffee, etc., are required on short notice, the Hyatt Brilliant Lamp Heater is a genuine boon. Its strongest points are its simplicity and absolute safety.

A guessing competition was provided, the prize of which was a five dollar bill and a Hyatt Brilliant Lamp Heater. The company had upwards of six thousand guesses.

The McClary Mfg. Co.

The McClary Mfg. Co. occupied a large space in the Machinery Building, where they had a very imposing display of stoves and ranges. Foremost among the latter was the "Pandora" range, so well and favorably known to the trade and to the general public through their extensive newspaper advertising, while among the stoves and heaters were to be seen such familiar lines as the "Famous," the "Victorian," and others. The cut reproduced shows only a section of the exhibit, which also embraced the popular "Sunshine" furnace for coal and wood, and the "Magnet" furnace for wood only.

The present exhibit is the most complete that the McClary Co. have ever made at the Western Fair, and that it was greatly appreciated was evident from the constant throng of visitors that inspected it and asked for information.

The Walker Steel Range Co., Limited.

Prominent among the stove exhibits was that of the Walker Steel Range Co., Limited, of Windsor, Ont. While their display embraced a wide selection of steel ranges and stoves, the most

stove, the company say, can be adjusted to suit heating requirements. They are also showing a line of air blasts.

D. McKenzie & Co.

Another exhibit of gasoline engines was that of D. McKenzie & Co., of London, Ont. The feature of their engines that the company lay stress on is



Exhibit of McClary Mfg. Co. at Western Fair, London.

their simplicity. They have done away with everything that makes an engine difficult for the average man to understand and work. Another feature of their engine is the spark gap, which

ington Drug Co. are the Eastern Canadian agents.

The company claim to have revolutionized the price of stock foods. They put

out 8-lb. boxes at 50 cents, 25-lb. pails \$1.50, and 50-lb. pails \$2.75.

Imperial Steel and Wire Co.

The leading feature of the exhibit of the Imperial Steel & Wire Co., of Collingwood, Ont., was a demonstration of wire nail manufacturing. It was interesting to see the long coil of wire converted into nails at the rate of over 100 a minute. Samples of the nails were given away to interested spectators. Models of fencing were also exhibited and proved a strong attraction to the rural visitors. The parties in charge of the exhibit stated that they had received orders for several thousand rods of fencing through their exhibit here.

Goold, Shapley & Muir Co.

The Goold, Shapley & Muir Co., of Brantford, were well represented by an interesting display of gasoline engines, grinders and pumps. The attendants seemed to be having a busy time demonstrating the virtues of the various exhibits.

Telephone City Stoves.

The Telephone City Stoves, Limited, of Brantford, Ont., had a tasteful and attractive display of their wood stoves and coal heaters, and distributed pamphlets containing useful information about their stoves to passers by. This firm have made remarkable progress during the short period since their en-

D. Moore Co.

A good display of stoves was made by the D. Moore Co., of Hamilton. This firm manufactures the "Treasure"

Cement Roofing. The rest of the display consisted of magnesia and asbestos pipe and boiler covering and materials. A great deal of interest was evinced in



Exhibit of J. S. Mitchell & Co. at the Sherbrooke Exhibition.

stoves and ranges, and their exhibit was in every way a creditable one and evoked much interest among the visiting public.

Chatham Fanning Mill Co.

The Chatham Fanning Mill Co. displayed an interesting line of incubators, fanning mills and farm scales, which attracted much attention, especially from agricultural visitors.

the roofing by visitors, especially those in the building trade.

Brantford Cordage Co.

The Brantford Cordage Co. had an excellent display of binder twine. The balls of twine were built up in conical shape neatly decorated with a variety of flags. The company say they are experiencing a constantly increasing demand for "Gilt Edge" binder twine.

Cannon Stove and Heater Co.

The Cannon Stove & Heater Co., London, exhibited the "Economy" gasoline stove and the "Empire" cooker and made demonstrations showing the peculiar merits of each. The company claim that their oven is the most perfect on the market in respect that it can be heated in three minutes and the heat being evenly circulated gives the best results in cooking.

Eureka Planter Co.

The Eureka Planter Co., of Windsor, Ont., had an interesting exhibit consisting of gasoline engines, combination wagon box, hay and stock rack, and garden and farm tools.

Spramotor Co.

Numerous visitors were attracted to the exhibit of the Spramotor Co., where a demonstration was made of the virtues of the spramotor as a preventive of potato blight and rot.



Exhibit of Telephone City Stoves—Western Fair, London.

terprise was started, and their exhibits at Winnipeg, Toronto and London have elicited an interest and been followed by results which have exceeded their most sanguine expectations.

Philip Carey Mfg. Co.

A good exhibit was made by the Philip Carey Co. At the back of the booth was displayed a miniature house roofed with the Carey Magnesia Flexible

The Hickson Bed Mfg. Co., of Muncie, Ind., have sent a representative to Welland to investigate the possibilities of a factory at Port Colborne, Ont.

EASTERN TOWNSHIPS EXHIBITION AT SHERBROOKE.

WITH the exception of the National Exhibition at Toronto, the Eastern Townships Fair, held annually at Sherbrooke, Que., is said to be one of the most important exhibitions in the Dominion. This year the Fair opened on August 27 and lasted

able in vaudeville circles. When it is remembered that the attendance, on what is called the best day, exceeded thirty thousand people, some idea of the magnitude of this Fair may be formed. Owing to a regrettable accident on the Grand Trunk Railway at Richmond the

exhibit in the main building each year comes in for much admiration. Each recurring year new developments can be noted and the attractiveness of this year's display of hardware, mining and mill supplies has never been surpassed. When it is remembered that this business is the result of about thirty years of steady growth and progress, it is not surprising that Mr. Mitchell has won the place and prominence in the commercial and social world that he now holds. J. S. Mitchell & Co. have three travelers on the road who cover the Province of Quebec as well as some points in the Maritime Provinces, and outside of Montreal and Toronto they have one of the largest wholesale hardware establishments in Canada. There stores on Wellington street are heavily stocked with a complete line of shelf hardware of all descriptions, while their heavy hardware and mining and mill supplies are stored in large warehouses situated on their own siding near the Union Depot. Their aim in business is prompt and careful attention to all orders whether large or small.

Dominion Linseed Oil Co.

That science and business go hand in hand to-day is beyond question. This was well illustrated by the exhibit of the Dominion Linseed Oil Co. First of all the exhibit was artistically arranged by their representative, Mr. A. B. Rilance, who was responsible for all arrangements and whose kindly attention and courtesy deserve mention. It was no trouble for him to outline the details of the manufacture of Livingston's Improved Brand; Livingston's Lamb Food; Livingston's Oil Cake, and Livingston's Dairy Meal. Descriptions of the advantages of using these products, Mr. Rilance very clearly explained to the vast crowds around his exhibit. Through his very convincing explanations he succeeded in carrying off the first prize in his flaxseed. The merits of these methods of feeding prize animals will be a great boon to the farming population of this country and it is gratifying to Mr. Rilance and his company to know that the most successful agriculturists are the users of the Dominion Linseed Oil Co.'s foods. The head office of the company is at Toronto. Their chief factory is situated in Montreal. In addition they have factories at Baden, Elora, Guelph, and Owen Sound.

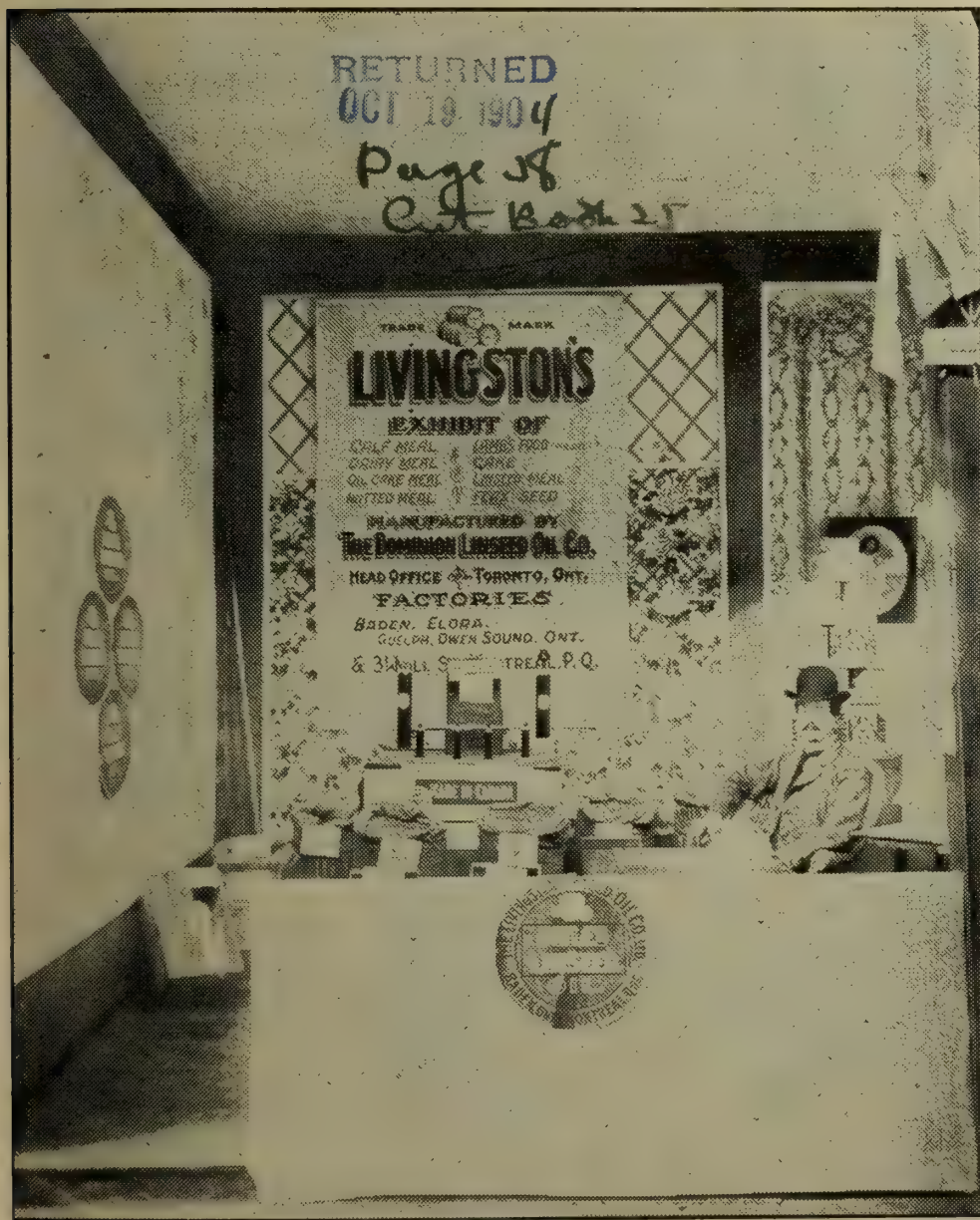


Exhibit of Dominion Linseed Oil Co. at the Sherbrooke Exhibition.

until September 30. To use a stereotyped expression, it was larger and better than ever, and the directors deserve congratulation for the excellent management throughout. The exhibits of forest, field, and mines were copious and varied, while the so-called circus attractions were among the best avail-

number of visitors to the Fair was considerably decreased on the days following the disaster.

J. S. Mitchell & Co.

J. S. Mitchell & Co., have always been among the strongest supporters of the Sherbrooke Fair and their splendid

Who Sells Stock Food

IN YOUR NEIGHBORHOOD?

Large quantities of Stock Food are consumed yearly, and somebody is selling it—and making a nice extra income with practically no expense or risk.

The hardware store is the farmer's store, and is the natural depot for Stock Food.

International Stock Food

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WRITE TO-DAY FOR OUR PROPOSAL.**

**INTERNATIONAL STOCK FOOD CO.
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PURE MANILA ROPE,

Highest Quality Made,

BRITISH MANILA,

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LATH YARN,

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of every description.

Lowest Prices and Highest Quality.

Wire, Write or 'Phone

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PETERBOROUGH, ONTARIO, CANADA.

The latest and finest machinery is operated in this factory and although not the largest, it is the finest mill of its size in the world.



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A New, Light, and Inexpensive Steel Range.

Burns Coal, Coke or Wood.

Has a three-piece expansion top, large drop broiler door, large end shelf, duplex grate which is reversible for coal or wood, large ash-pan, sectional leg base, interchangeable flush reservoir and a handsome high shelf.

The Quita, although a cheap range, has all the strong points of our better lines.

Burns Coal, Coke or Wood.

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A MANUFACTURING COUNTRY.

CANADA has got beyond the swadling clothes which stamped her an agricultural or lumbering country, and has reached the point of development which makes feasible the claim that this country is now a manufacturing country.

In twenty-two years the amount of capital invested in manufacturing in Canada has increased from \$159,000,000 to \$520,000,000, a quite respectable figure. In the two decades we have built up an iron and steel industry, a Portland cement industry, an electrical goods industry, a pulp wood industry, a beet sugar industry, a pork-packing industry—to attempt to enumerate the phases of development would be futile. Whereas twenty-five years ago manufacturing was an altogether secondary phase of our national life to-day the prosperity and progress of the country depends in large measure on the welfare of our manufacturing classes. There is laid in Canada to-day the foundation for almost every class of manufacturing,

and we are reaching, pushing forward towards the point wherein our industrial concerns will not have to look to foreign countries for equipment and materials, as is now the case.

It is true that our imports of manufactured goods are greater than ever before. Superficial reasoning might ascribe this to reduced domestic production. It is, however, due rather to an expanding demand. Each new industry has created new demands, which are frequently supplied by foreign manufacturers until the industry is so well established that supplies can be produced to advantage at home.

For instance, practically all the machinery for the cement mills, blast furnaces, beet sugar factories, etc., had to be imported. Repairs for some of these can already be secured in the country, and ultimately Canadian makers will be able to fit out any such plant.

Again, the expansion of our foundries and machine shops opened up a demand for pig iron. This was imported for many years but is now almost altogether supplied by Canadian furnaces.

So it has been and will be. Canada is to-day a larger buyer of machinery from the United States than any other country in the world. Practically all this machinery is destined to add to our manufacturing equipment and to hasten the time when Canada will be able to compete with the most aggressive nations in the world for the business of the world.

EFFECTS OF THE DUMPING CLAUSE.

ALREADY the effects of the "dumping" clause in the tariff are being felt by the trade. Despite the unquestioned possibility of evasion the enactment has so embarrassed many manufacturers of certain lines in the United States who for years have been quoting special prices for the Canadian market that they are already curtailing their shipments to this country, and in some instances have discontinued their connection here almost entirely.

Among the lines referred to are cartridges. The Canadian trade has for some time been supplied from Great Britain and the United States as well as by Canadian manufacturers. Some

of the United States concerns have made a practice of making a special price for Canada, but now they find the special tariff prevents them from continuing this practice. Their trade here will suffer. The British manufacturers who have a foothold here, however, have not been dumping, and although their prices are still higher than the Canadian, they are still retaining their hold here.

In many minor lines the same effect has been observed, while in some of the staple lines, such as axes, hammers, saws, etc., the Canadian manufacturers have benefited greatly at the expense of their United States competitors. So far British exporters have not been seriously embarrassed in any line, while in some lines they are given distinct advantage through the prevention of "dumping" by their chief competitors outside of Canada, the United States makers. It is a question, however, if the average British manufacturer has interested himself in the present conditions, as would be advisable, if he is to reap any benefit from the situation.

CARELESS LETTER DELIVERY.

THE case of Mr. Chouillou, of Montreal, reported in another column, brings into prominence a state of affairs which is, to say the least, most unpleasant. Mr. Chouillou, a prominent citizen of Montreal, and a man whose honesty it would be insulting to question, was accused in the courts of having received and opened letters not intended for him. In the trial, which ensued, it was shown that Mr. Chouillou was constantly receiving letters on which the addresses were misspelt, and that when the letters, concerning which he was accused came to hand, it was quite natural for him to conclude that they were intended for him.

While it may appear that in many cases the writers of letters are to blame and while it is certain that the postoffice authorities are not expected to be infallible, yet it must be admitted that there is too much carelessness in the handling of letters by the postoffice authorities.

There seems to be an amazing amount of carelessness in the delivering of letters at the Montreal postoffice. Letters

come to the MacLean Publishing Co. addressed to J. C. MacLean, McGill street, to the Dominion Publishing Co., the Dominion Gazette, and the Military Publishing Co., none of which have anything about them similar to the proper address. It would be impossible to detail the scores of faulty addresses that continually pour into this office, and which must not only cause annoyance to the postoffice officials, but to those persons for whom these letters and parcels are properly intended. The Chouillou case should be taken to heart by the postoffice officials, and greater pains should be taken to look into the exact meaning of an address before it is blunderingly handed over for delivery to a postman who knows little more than an automaton.

EXPRESS SERVICE ON THE I. C. R.

DESPITE some faults incidental to a political railroad, the service on the Intercolonial is highly satisfactory and creditable to the management, and in some respects superior to anything either in Canada or the United States. An improvement, however, in the express service is very urgently needed, and it is to be hoped that the Minister of Railways and Canals may shortly be able to remedy the grievance and meet the wishes of business men generally by providing for a competing express service on the people's road.

As it is at the present time the Canadian Express Co., notwithstanding a stipulation in their agreement with the Government providing for equal facilities and terms for competing companies, has a practical monopoly of the express business on the Intercolonial and Prince Edward Island Railway, and the Dominion Express Co., which desires to enter this territory has so far failed to overcome the obstacles placed in its way.

Meanwhile business men suffer in two ways. The absence of competition leads to laxity and carelessness on the part of employes and a general disinclination to extend accommodation and courtesy to patrons which is common to all monopolistic corporations. On the other hand, shippers have to bear the high rates charged for shipping over two lines in order to reach points not covered by the Canadian Express Co.

The chief sufferers are the fish shippers of Nova Scotia, the fruit growers of Ontario and the produce men of Prince Edward Island. Fish and fruit, particularly, require despatch and cannot bear the high charges entailed in shipping over two lines. Both these lines are capable of large development and the competition of rival express companies, in addition to ensuring expeditious dispatch, would lead to the opening of new markets and a general increase in that inter-provincial trade which is so necessary for the solidarity of the Dominion.

At the Maritime Board of Trade meeting in Moncton the feeling of the Maritime business men was expressed in no uncertain way, while that of the Ontario fruit growers was voiced by Mr. E. D. Smith, M. P., of Winona who, at the invitation of the board, addressed the delegates.

This is a point on which the east and west are as one for the good of all. Mr. Emerson would do no small service to the business interests of Canada by speedily providing for a competing express service on the I. C. R.

KEEP UP YOUR INSURANCE.

It seems that no matter how many lessons are thrust upon the attention of the world there will be many who refuse to heed the warning until it is too late. A few days ago a fire visited a small town and caused severe loss to several firms, not one of whom were adequately insured. Out of half a dozen only one was in a position to stand the strain; the others were crippled; the results of years of work and planning gone in a few hours. In another town fire recently destroyed four premises. All were insured, however, and although in every case there was some loss, each of the four were able to make their plans for restarting their business at once.

Fire insurance is an item of expense that every business man should treat wisely and generously.

IMPORTANT LEGAL DECISION.

ALL retail merchants as well as the trades particularly interested will be interested in the ruling of the judge in the recent dispute between H. K. Wampole & Co., proprietary medicine manufac-

turers, Toronto, and J. T. Lyons, druggist, Montreal, the former of whom petitioned for an injunction to prevent the latter from selling Wampole's Tasteless Cod Liver Oil for less than one dollar. The decision is as follows:

The plaintiff presents a petition for an injunction to prevent defendant, druggist, of Montreal, selling for less than one dollar a preparation of cod liver oil, known as Wampole's Tasteless Cod Liver Oil. He is the manufacturer of this preparation, and an agreement had been made by which the plaintiff agreed to sell the defendant his preparation at a fixed price, equal to 58 cents a bottle, the defendant agreeing not to retail it at less than one dollar a bottle. Plaintiff alleges that defendant has violated his contract by selling it at 85 cents. He even advertises it at 68 cents, thereby causing serious and irreparable damages to plaintiff.

(1) The defendant pleads that the agreement in question is illegal and against the freedom of trade.

(2) That the agreement was cancelled by letter dated June 27, which the defendant had a perfect right to do as said agreement was for no specified time and also that he had sold all the cod liver oil purchased from plaintiff under said agreement.

(3) That the oil he was selling at 68 cents a bottle had not been bought from plaintiff but from other sources. Affidavits were produced from both parties to sustain their pretensions and had not been contradicted.

An interlocutory injunction is asked for to prevent defendant from selling at less than \$1 until the case is heard on its merits. On the question of the legality of the contract I see nothing to interfere with freedom of trade or the interest of the public in a manufacturer agreeing with a retailer that his goods be sold at a fixed price when it is to the manufacturer's interest to do so, but what interest has Wampole to stipulate that his preparation be sold at 80 or 90 per cent. profit? When I put the question to petitioner's lawyer, "What interest has your client in ask-

ing for this injunction?" he said the object was so as not to confound his preparation with others of inferior quality. This reason which is of doubtful value is not the true reason. I find the reason in the petition, in the contract itself and in an affidavit. The plaintiff's petition alleges that without an injunction to prevent defendant from selling his oil at less than \$1.00 the price agreed upon, he would suffer serious and irreparable damages, because he is sure that if he continues to cut the price that all other druggists will do likewise, considering themselves free from their similar contracts. But I do not see in this any great injury, the benefit would be for the public. I can see the injury it will do to retail druggists who reckon more on small sales and large profits; but Lyons, like the departmental stores, believes in a quick turnover and small profits and is satisfied with a profit of 10 cents on each bottle. What injury does this inflict on Wampole who still gets the same amount viz., 58 cents for his preparation? The lowering of the price and competition cannot affect him nor force him to reduce his price to the dealer. It is the Retail Druggist Association combined who have decreed that this oil shall be sold at \$1.00 and not less and it is in their interest that Wampole has brought on the present action in which he has no apparent or appreciable interest. This is evident (1) From the heading of Wampole's contract with the wholesalers (exhibit No. 1) where the policy of the members is stated as the price restrictive plan as adopted by the drug section of the Retail Merchants' Association of Canada.

(2) The contract between Lyons and Wampole (exhibit No. 2) for retailers and which reads as follows:

Contract for Retail Trade.

The Henry K. Wampole Co., of Toronto, for the protection of the trade and in pursuance of an agreement entered into with the Drug Section of the Retail Merchants' Association of Canada, requires the contract set out below to be signed by the retail trade before

the retail trade will be entitled to purchase Wampole's Tasteless preparation of Cod Liver Oil, etc.

Lastly, in an affidavit absolutely illegal, produced by the plaintiff wherein D. R. Moore, advocate, pretends to find existence of judiciary proceedings in a similar case where the Ozone Co., of Toronto, sued the present defendant for breaking a similar contract to this one and the existence of a judgment against defendant, but he forgets to state that the injunction referred to was only an interlocutory one. In this illegal affidavit I find, however, the real cause of the action, like the action of the Ozone Co. was because an agreement had been entered into with the retail druggists.

I conclude from these documents and the nature of the agreement that it was the retail druggists, associated and combined, who have in their own interests fixed the price of an article at \$1.00 that costs them 58 cents, thereby making a profit of nearly 80 per cent., certainly an exaggerated profit, and against the public interest. He who asks a judge to prevent another from doing a certain thing should prove like all plaintiffs an actual and tangible interest in the case and also prove that without an injunction being granted he would suffer serious and irreparable damages.

Supposing that Wampole had a personal interest in the case he has taken against Lyons for violation of contract, an interest that does not seem to me to exist, the damage would be neither serious nor irreparable. Wampole still has the right to institute an action for damages without the judge's consent. Should he succeed he can force the defendant to pay the amount of the damages. The injury he would have suffered would be reparable.

Injunctions are extraordinary proceedings, and are allowed only in cases determined by law, viz.: When the commission or the continuation of an act or an operation during the time being would cause a serious or irreparable injury.

Another reason for refusing the injunction is that the defendant did not sell any oil at a reduced price that had been bought from plaintiff, but had been obtained from other sources. The agreement between the parties was that in consideration of Wampole supplying the defendant with his oil at a price

mentioned in schedule "D" Lyons agrees not to sell at a less price than the one mentioned in schedule "E." What is the meaning of this contract? It means that if Lyons does not carry out his agreement Wampole will not be bound to sell him any more oil at the price. If Lyons had on hand any oil bought under the contract Wampole could, if the contract was a legal one, force Lyons to return it to him on returning him the amount he had paid for it, or, if not, he could claim damages. But when Lyons has no more on hand and can get some elsewhere, what right can Wampole have to prevent Lyons from disposing of it?

Oil bought elsewhere does not come under the terms of the contract. The plaintiff in his petition advances a strange pretention, that is that the contract, being for an indefinite period, cannot be annulled only by the consent of both parties. The fact is the contrary in partnerships. Any partner can terminate a contract at any time, where the length of duration of the contract has not been determined. In the present instance the parties are bound only as long as both parties consent to execute it, only that perhaps the retailer could force the manufacturer to sell him his oil at the price agreed upon as long as he had lived up to his contract. But as soon as the retailer does not wish to buy any more of his oil, or if he wishes to sell it at a reduced price, the manufacturer cannot force the retailer to buy his oil from him.

Lyons has not bound himself to do so, he simply promised to retail at \$1 oil bought directly from Wampole. Therefore Lyons, having no more oil purchased from Wampole, there is no reason to prevent him from selling Wampole's Cod Liver Oil at less than \$1 a bottle.

For these reasons I refuse the interlocutory injunction asked for, and revoke the order given ex parte in favor of the petitioner, and suspended by us until the actual judgment is given.

2nd September, 1904.

The Court of Appeal on September 16, confirmed the refusal of Judge Pagnuelo to grant the H. K. Wampole Co., an interlocutory injunction restraining J. T. Lyons from selling their dollar bottles of cod liver oil for 85 cents. The court refused to hear the appeal on the ground that an interlocutory judgment could not be carried to the higher courts without permission of a Superior Court judge.

CANADIAN MANUFACTURERS' ASSOCIATION

Thirty-Third Annual Meeting held at Montreal, Sept. 20, 21, 22, 1904

IN many respects the thirty-third annual meeting of the Canadian Manufacturers' Association held in the Windsor Hotel, Montreal, September 20, 21 and 22, was like other conventions, warm in words of welcome and appreciation, only vastly magnified even in this superficial aspect as befitting the largest association of its kind in the world. But when the deeper significance of the meeting of the leading business men from British Columbia, Manitoba, Ontario, Quebec and the Maritime Provinces is considered, the gigantic task the association has set itself strikes home with full force, and it is fully realized that the Association needs all the strength, energy and earnestness it can muster to bring to a successful issue the arduous duties undertaken. It was a remarkable meeting in many ways, remarkable for the vigor and energy displayed in grappling with the problems confronting the existence of Canadian industries, remarkable for the clear insight displayed in recommendations to secure proper legislation and to prevent improper legislation affecting our manufacturing or trade interests, remarkable for the encouraging reports received from the various committees which have been actively engaged during the year, and lastly truly remarkable as clearly depicting the identical interests of all Canadians, and serving as an irrefutable denial to all who have contended that the Association is but a mere tool for devising ways and means to satisfy the greed of the insatiate industrial class.

Work of the Branches.

The Association's branches cover the Dominion, with special executives at each centre to concern themselves with local affairs and to bring suggestions before the general executive council, and there are sections of the different trades to guard the interests of each. The reports brought in from these denoted not only wonderful numerical growth, but all told of accom-

plishment evincing earnestness and energy, and these suggestions were pregnant with the effort and time spent in their preparation.

It was noticeable how important were the tariff and labor problems in the discussions, although the conditions and outlook of business and suggestions for the remedy of grievances occupied a good share of attention. All the various phases of the many difficult problems were met with a bold front, and grappled with in an

fellowship reigned supreme. They all, for the most part, exemplified the best type of Canada's sons, vigorous alike in mind and body, and it was encouraging to note the large number of men who were in the pink and prime of life, indicating that the killing pace of modern business methods had touched them but lightly, at least to outward appearances.

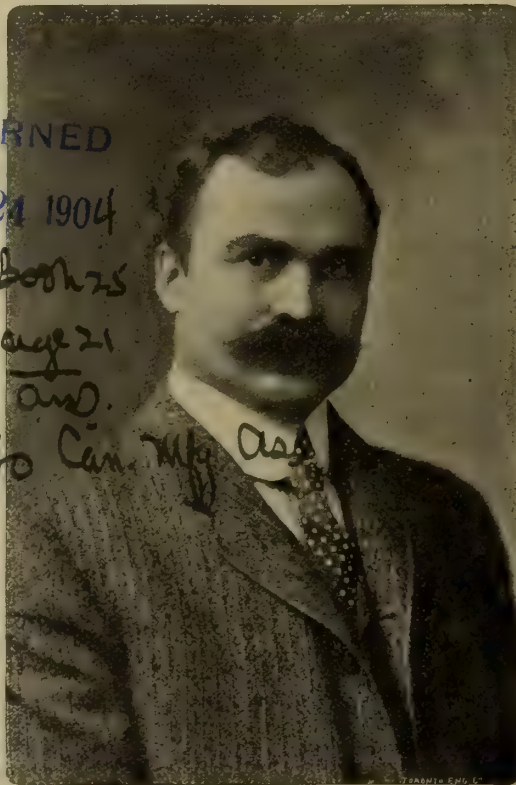
Tuesday, the first day of the convention, was devoted to the meeting of the various trade sections of the association.

Engine and Boiler Section.

The meeting of the engine and boiler section was held at 10 a.m., being presided over by Mr. R. O. McCullough, president of that department. The members are working in hearty co-operation and expect by this united effort to eliminate some of the objectionable features of the trade. The matter of engine specifications was discussed in connection with the taking of contracts, and a set of recommendations were drawn up and agreed to. The question of transportation and freight rates was also given a hearing. At the election of officers Mr. R. O. McCullough was re-elected chairman, and Mr. J. M. Jenks vice-chairman.

Delegates Entertained.

At 2.30 p. m. the members of the association were given a sail around the harbor by the Harbor Commissioners on the Duchess of York. Though the weather was raw and wet, about 100 delegates and their lady friends availed themselves of the courtesy of the commissioners and the trip proved highly enjoyable. Refreshments were served in a sumptuous manner. As the steamer neared the dock Mr. W. K. George, vice-president, in the absence of the president, Mr. George E. Drummond, thanked the Harbor Commissioners on behalf of the Canadian Manufacturers' Association for their kindness and courtesy. In a few well chosen words Mr. George expressed the opinion of the association that Montreal is the natural port of Canada and that the association



W. K. George, Toronto.
Elected by Acclamation President of the Canadian Manufacturers' Association 1904-1905.

earnest and fair manner, as is only natural in men dealing with large issues.

The Members.

The members themselves who thronged the corridors and rotunda of the Windsor Hotel bore striking testimony to the future of Canada. Some there were who exchanged confidences in earnest discussion, while in others the spirit of jovial good

stood prepared to assist them in making it the greatest port on the continent. Its future was assured and as it was the outlet of the products of the great west Montreal Harbor Commissioners were warranted in asking for the substantial support of the country at large. Mr. George closed his happy speech with the slogan:

"The National pride of Canada
Is the pride of a princely land,
And the goods that are 'Made in Canada'
Are the goods that her sons demand."

This apt slogan was received with cheers. Hon. Senator McKay responded on behalf of the Harbor Commissioners, expressing pleasure at the acceptance of the members of the Canadian Manufacturers' Association of the board's harbor trip.

OPENING SESSION.

The formal opening session was held in the Ladies' Ordinary, at the Windsor Hotel, Tuesday evening at 8 o'clock. The room was tastefully decorated with "Made in Canada" emblems. Representatives of the Dominion's manufacturing interests from Halifax to Vancouver were in attendance. Mr. Geo. E. Drummond, the president, presided, and after an inspiring invocation had been pronounced by the Rev. Dr. Barclay, Mayor Laporte, on behalf of the city extended a most cordial and sincere welcome to the delegates, naively pointing out the advantages Montreal offered as a manufacturing centre. He was greeted with loud applause. Mr. J. J. McGill, chairman of the Montreal branch followed, tendering the welcome of that body and expressing the pleasure the local branch experienced by having the meeting at Montreal and assuring the delegates that the local branch would do all in their power to make their stay a pleasant one.

Mr. W. K. George, Toronto, vice-president of the association, replied, alluding to the pleasure of renewing friendships in Montreal, and discoursing on the growth of the association.

Then followed the feature of the evening, the president's address, which naturally dealt with the great trade issues affecting the country, and needless to state Mr. Drummond carried his hearers with him from the start, and applause burst forth frequently, especially when

he urged the importance of conserving home markets and the need of radical changes in the tariff.

President's Address.

Mr. Geo. E. Drummond's rising to give his address was the signal for an outburst of applause which lasted several minutes. He was obviously both surprised and affected by the tribute.

The president in a manly, straightforward way, referred felicitously to his pleasure in welcoming the delegates and then plunged into a masterly and full review of the position of manufacturers and industrial conditions. He urged that Canadians should read correctly the signs of the time, which interpreted meant they must be up and doing, and they must recognize this national and imperial obligation in respect to the



C. C. Ballantyne,
Vice-President Canadian Manufacturers' Association,
1904-1905.

naval protection of their commerce. By adept reasoning, he showed that in considering the course adopted for the building up of Canada, the manufacturing industries in Canada were of vital importance. Continuing, he showed clearly that the great fabric of commerce is all woven together on the warp of production.

By reference to industrial statistics he showed the importance of manufacturing compared with other great interests, proving that they entailed a larger output than the combined interests of agricultural, dairying, mineral, forest and fisheries, although by no means did he attempt to belittle their importance.

Mr. Drummond said in supporting these assertions:

"Let us as briefly as possible take stock of the position that our Canadian manufacturing interests occupy to-day.

"In the first place, I think we are well within the mark when we estimate that we have now not less than \$520,000,000 of capital invested in manufacturing in Canada. In 1881 there were \$159,000,000 so invested. Thus, in twenty years we have, in the face of many difficulties, increased our capital investment by \$361,000,000.

"I have been favored with some particulars in regard to the 1901 census of the Canadian manufacturing industries, and in those statistics I find that we have much cause for congratulation.

"The total production of the 14,650 Canadian factories in 1901 is estimated at \$481,053,375. To produce this amount of goods there were 344,095 work people and clerks employed, to whom were paid \$113,283,146 in wages."

Mr. Drummond proceeded to quote figures to prove the importance of the manufacturing industries.

Then followed the question of marketing the enormous production, and it was strongly urged to conserve the home market, and to further establish native industries that will create and maintain a prosperous people and provide a home market.

In support of this Mr. Drummond said:

Make the Goods at Home.

"Can we not produce more in Canada, and what would that production mean to this country?

"Our importations of dutiable goods this year have been to a value of about \$149,000,000. Statistical returns are not yet to hand to enable us to fully analyze the goods actually covered by this amount, but as a guide we know that our importations of wholly or partially manufactured goods last year was \$149,600,000. With these figures before you I believe you will agree with me that with a properly constructed tariff, admitting raw material at a low rate of duty, and with proper protection upon the finished article, we could easily increase our output of manufactures by \$60,000,000.

"According to the census returns 344,095 operatives produce \$481,053,375 worth of goods, and the manufacture of \$60,000,000 of goods will employ 42,900 work people—yes, even more, for we shall be making the more highly fin-

ished class of goods, which require more labor than many of the lines now manufactured. The employment of 43,000 people will build another city equal in population, if not in wealth, to that of Toronto, and it will consume upward of \$20,000,000 worth of farm products annually. Surely here is a policy worthy of the support of a patriotic Government and people."

In referring to trade and navigation returns he maintained that they afforded ample proof for the need of the revision of the Canadian customs tariff. He condemned the growth of importation of goods from the United States. In urging tariff revision he alluded to the measures the Government has passed acceding to the points they had urged.

Canada's Importations.

"The trade and navigation returns," he stated, "for the year 1904, are ample proof of the need of radical changes in the present Canadian customs tariff. On the basis of goods entered for consumption and reports of domestic produce, the increase in Canadian trade for the past year was \$2,788,611, which is a small increase compared with those of the years immediately preceding. A further analysis brings to light the fact that the domestic exports show a shrinkage of \$15,987,235. This decrease is accompanied, first, by an increase of \$1,813,152 in the export of foreign produce; and secondly, by an increase of \$18,775,896 in the importation of goods for consumption; in other words, while our total trade statistics have not altered materially, the balance of trade has turned against us in one year to the extent of \$34,763,131. That fact explains the liquidation of woollen mills, the four thousand silent cotton looms, the transformation of shirt manufacturers into shirt importers, and it is a striking statistical accompaniment to your need of business during the first six months of the present year. What further do we find? In 1903 our importations from the United States amounted in value to about \$129,000,000. This year they have increased to \$143,010,578, excluding bullion, an increase of more than \$14,000,000, or about 10 per cent. Of this increase over \$8,850,000 was dutiable goods, so that the main feature of our trade, during this past year has been the growth of importations from the United States, and the main feature of these imports is that they are to a large extent in goods

that could be made in Canada. The amount of dutiable goods imported under the general tariff from the United States in the year ending June, 1904, was \$77,390,807. That, in short, represents the value of the Canadian harvest reaped last year by the United States—a country that will not admit our goods on anything like reasonable terms. Nevertheless, we must admire the strong, consistent national policy pursued by the United States in conserving her own interests.

"In 1903 over 38 per cent. of that country's imports consisted of crude products, which are raw material for their industries. In Canada only some 20 per cent. of the imports is in the form of raw material, and that in spite



George E. Drummond, of Montreal,
Retiring President Canadian Manufacturers' Association.

of the fact that we must import our cotton, anthracite coal, and so forth, which the United States produces at home. The United States importation of articles wholly or partially manufactured, and articles of voluntary use, which are largely manufactured goods, comprises 40 per cent. of their importations, whilst similar goods in Canada made up 66 1-2 per cent. of our importations."

Canada's Tariff.

Continuing, Mr. Drummond said:

"Now, let us consider the Canadian Customs tariff and our trade relations.

"With respect to our present Customs tariff, the Canadian Manufacturers' Association occupies exactly the same position to-day as when we

met at Halifax two years ago and adopted the following resolution, namely:

"Resolved, That in the opinion of this association the changed conditions which now obtains in Canada demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries;

"That, in any such revision the interests of all sections of the community, whether of agriculture, mining, fishing or manufacturing, should be fully considered, with a view not only to the preservation, but to the further development of all these great natural industries.

"That while such a tariff should primarily be framed for Canadian interests, it should nevertheless give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged, recognizing always that under any conditions the minimum tariff must afford adequate protection to all Canadian producers."

"As I have said on a former occasion, 'the two great and practically the only markets available for Canadian products to-day are, firstly, the home market; and secondly, Great Britain, the Mother Country.' What I may call our 'Halifax policy,' therefore has a double purpose, viz., to conserve as much as possible these two markets to the Canadian people, and in the case of the British market, to transfer orders for our surplus requirements to our own customers, the people of the Mother Country."

With regard to preferential trade he said in part: "We have placed ourselves unreservedly on record as favorable to a tariff arrangement that while encouraging the development of industries in Canada, will nevertheless give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged." He continued by discussing particular aspects and colonies in a full manner.

The labor problem loomed large and he advocated clearly that labor and capital were mutually dependent and should work hand in hand. Strikes always involved loss on both sides, generally with a settlement which could have as easily been made at the outset.

Mutual peace was the cry and the necessity of this day. Reference was made to the successful exploiting of the engineering trade, and then the vital question of fire insurance, which is agitating the business men, particularly of Montreal and other cities with congested districts was touched upon. As the manufacturers are the largest payers of such insurance, it was strongly urged that measures be taken to secure not only proper inspection but also proper adjustment of rates, which was hardly the case at present. This was gone into very fully.

In conclusion he referred not only to the remarkable growth of the association but also to the national character it had assumed and its consequent national importance. The importance of unity and co-operation was dwelt upon. His parting message as retiring president was in part: "Let Canadians be known for their fair dealing and business integrity the world over. Take pride in your national products and let the goods be of such a standard of excellence that the stamp 'Made in Canada' will ensure recognition in every market."

Vote of Thanks.

Mr. E. Gurney, of Toronto, in moving the vote of thanks for the able and careful address sparkled with mother wit and endorsed the opinions expressed in no uncertain manner, concluding by an earnest appeal for the co-operation of all concerned to make Canada a name to be proud of. He ridiculed reciprocity arrangements.

Mr. R. H. Alexander, of Vancouver, seconded the motion by referring to the national scope of the organization as well as alluding to the noble work done by the president.

The president then called upon Sir Lloyd Wise, of England, who in a few happy words endorsed the president's address and made mention of an exhaustive report he had prepared for the consideration of the association. With a fervent singing of the National Anthem the meeting broke up to begin its active business duties in the morning.

Business Sessions.

The first business session was commenced Wednesday morning at 10 o'clock in the Ladies' Ordinary of the Windsor Hotel, with President Geo. E. Drummond in the chair, and past and present officers on the platform, and a fair representation of the manufacturing interests present.

After a summary disposal of a few preliminary items of business and the reading of several letters of regret, the reports of the proceedings of the committees were taken.

Treasurer's Report.

Mr. Geo. Booth, Toronto, presented a most satisfactory report, which clearly showed the marvellous growth of the association, and notwithstanding greatly increased disbursements the balance was the most satisfactory in the history of the association since its re-organization four years ago. The total receipts principally from membership fees were six times as large as four years ago, and although the detailed accounts were higher and more numerous the cash balance was satisfactory.

The total receipts were \$34,417.13, and the total disbursements \$30,006.11, leaving a cash balance of \$4,816.38.

In moving the adoption of the report Mr. R. C. Wilkins, Montreal, contended that it was advisable to have the next treasurer's report printed and distributed to all visiting delegates. Mr. T. P. Murray, of Toronto, also spoke in reference to this, and the resolution was unanimously carried in adopting the satisfactory report.

The Secretary's Report.

The call for the secretary's report was greeted with loud applause, testifying to the popularity of that gentleman. Mr. R. J. Younge, B. A., the secretary, presented a report which he characterized as the most successful in the history of the organization. He traced the history of the association since its re-organization four years ago when it had a membership of 120. Now from a provincial association they had grown to national importance with six branches and 13 sections, with a membership of over 1,500, an increase of 246 in the past year. He outlined the importance of the association and advocated correspondent membership in foreign markets. Note was made of the progress during the past year and the problems discussed. The association was advertising Canada and creating a national patriotism. There had been 120 committee meetings at the head office with an average attendance of six, and ten legislative measures were traceable to this influence. He cordially thanked the associate secretaries for their co-operation.

In moving the adoption Mr. J. P. Murray, Toronto, commented upon the modesty of the secretary and testified to his untiring energy and ability. The report was unanimously adopted.

Reception and Membership Committee Report.

Mr. Robt. Crean, chairman of the reception and membership committee, presented the report. The membership campaign had resulted in a net increase of 246 during the year, giving a total membership of 1,511, of which Ontario has 876 and Quebec 412. Reference was

made to the successful western excursion after the conclusion of the meeting last year, as well as a mention of the Quebec banquet.

A Great Britain excursion was recommended also. In conclusion the active interest of the association in securing new members was requested.

The discussion following touched upon all features, the Great Britain excursion being especially commended as ensuring both interest and instruction. Mr. Murray was particularly interesting.

Commercial Intelligence Committee.

Mr. Arnold W. Thomas, chairman of the committee, presented a report eloquent of increased activity and usefulness. Eleven good meetings had been held and among the subjects of discussion might be mentioned the correspondent membership question, and in this connection it was resolved that whereas valuable markets for Canadian products are to be found in many parts of the world, the following resolutions be submitted:

(1) That the Dominion Government should be urged to extend its system of commercial agents.

(2) That the representatives should be active, energetic men, and should revisit Canada at least every three years to keep in touch with Canadian exporters.

The Japanese tariff discriminates against Canada, and it cannot be removed till 1911. The admission of United States catalogues was now subject to duty, although the circulation of their magazines could not be restricted. In conclusion the members were urged to use the facilities offered to the fullest advantage.

After some discussion the report was unanimously adopted.

Railway and Transportation Committee.

Mr. J. O. Thorn presented a very satisfactory report touching fully upon the transportation problem, and thus commending the building of the Grand Trunk Pacific Railway. The following resolutions were introduced as essentially sound:

(1) That rates shall be, with qualifications, what the traffic will bear.

(2) In the consideration of what the traffic will bear the cost of manufacturing or preparing freight for transportation must be a factor.

The committee had secured the services of an expert in the person of Mr. W. H. D. Miller, whose work was highly commendable. The function of the committee was advisory, although freight classification, especially a temporary schedule which would give manufacturers the reductions due them, was discussed. Coast rates, import and export rates, marine insurance, cartage, claims, delays in shipments and demurrage all had

received attention and were commented upon. Specific cases and their adjustment were reported, and the railway express service touched upon. Among the resolutions submitted the following loom up :

(1) That Canadian steamship lines should be extended a preference by Canadian shippers in both import and export trade.

(2) That the Railway Act of Canada should be amended so as to place the express companies in Canada under the jurisdiction of railway commissioners.

In moving the adoption of his committee's report, Mr. J. O. Thorn commended the work of Mr. Miller and urged the use of the committee. Mr. W. K. George also bore out the above. In seconding the adoption Mr. Wilkins urged that copies of the able report be sent to manufacturers not present at the meeting. The entire report was unanimously adopted.

Parliamentary Committee.

Mr. P. W. Ellis presented a full and exhaustive report, the following features being worthy of special mention. The aggressiveness of organized labor was exemplified in the Union Labor Bill, which, owing to the work of the committee, was held over, as several clauses of this bill were shown to be particularly injurious to the manufacturing industries of Canada. It was also urged that the importation of workmen who could not be secured at home be encouraged.

It was pointed out that there was a scarcity of labor in Canada, and in this connection the work of the Parliament in placarding Great Britain to the effect that skilled mechanics were not wanted in Canada was shown to be false, as in July last 6,717 hands were needed among this association.

In resolutions submitted to be forwarded to the Dominion Government the following are especially important :

(1) That the Dominion Department of Labor should give equal consideration to the needs of employer and employee.

(2) That provision should be made for the importation of skilled labor, provided the same cannot be secured in Canada.

The general labor question was not in as favorable position as desirable and strikes were too numerous. A more friendly relation was hoped for during the ensuing year.

The Provincial legislation in both Ontario and Quebec was closely watched, and the influence brought to bear upon several bills was touched upon.

In moving the adoption of the report Mr. P. W. Ellis outlined the classes of labor and prayed for two classes of unions. In seconding the adoption Mr. J. J. McGill commended the work of the committee. A discussion followed.

Mr. Wallace gave the views of the stove section, while Mr. J. S. McKinnon followed by praising the work in watching the bills introduced in the Parliaments. Mr. S. J. Vaudry gave an outline of Quebec legislation. The report was finally unanimously adopted.

Amendments to the By-laws.

Mr. R. J. Younge, the secretary, read two amendments, the first of which enlarging committees of the Parliamentary section to include chairmen of branches and sections, was adopted. The second amendment, dealing with the disposition of finances from the branches and restricting their expenditure so as to have it referred to the executive council, was finally thrown out.

The conclusion of the afternoon session witnessed a deputation from the Lord's Day Alliance, which urged the observance of the Sabbath. The reverend gentlemen were particularly happy in their views, and evidently favorably impressed the delegates. Canon Renaud urged the attention of manufacturers to this aspect of labor, while Rev. Dr. Gordon cited instances of Sunday work which he considered shameful. He thought a more equitable adjustment in some cases was necessary, although realizing the exigencies of expedition in some cases. The Rev. Dr. Pedley indorsed the views expressed by the other reverend gentlemen.

In the evening the delegates attended the performance of "The Silver Slipper" at His Majesty's theatre, as the guests of the Montreal branch.

CONCLUDING SESSION.

After the reading and adoption of the various reports of committees on Wednesday, as well as the discussion of the important question of a conference between the Trades and Labor Congress and the Canadian Manufacturers, the date being finally left for settlement in the secretary's hands, the work of the concluding session on Thursday morning must had come as a relief, as the discussions were so lively they were held in private.

As stated, most of the deliberations were behind closed doors, and during this time the convention discussed and considered the report of the tariff committee and the report of the fire insurance committee.

Report of the Tariff Committee.

This report, presented by Mr. W. K. McNaught, dealt with the need of tariff revision, and the prompt action necessary, as well as firmly stating this position. The Budget Speech came in for criticism also, and the growth of protectionist sentiment was alluded to. In conclusion the following recommendations were submitted and adopted :

1. That we pledge our continued support to the tariff resolutions passed at the annual meeting held in Halifax in 1902, urging an immediate and thorough revision of the Canadian tariff, from a national business standpoint.

2. That we re-affirm the resolution passed at the annual meeting, held in Toronto last year, recommending the appointment of a tariff commission of experts, as follows :

"That we recommend the establishment in Canada by the Dominion Government of a permanent tariff commission of experts, who shall have constant supervision of tariff policy and changes, and shall follow closely the workings of the Canadian tariff, with a view to making such recommendations to the Government as will best conserve and advance the interests of the Dominion."

3. That we stand opposed to any arrangement for reciprocal trade with the United States affecting the manufacturing industries of Canada.

4. That we again express our disapproval of the bounty system, as a substitute for the policy of protection.

5. That in the coming general elections we pledge our individual support to those candidates, irrespective of party, who announce themselves publicly in favor of an immediate general tariff revision upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries.

The Woollen Industry.

Respecting the woollen industry, the following resolution was also adopted :

"Whereas the slight increase made at the last session of the Dominion Parliament in the net tariff on certain lines of woollen goods, is altogether insufficient to redeem the Canadian woollen industry from the serious condition into which it has lapsed, many of the mills being in a more hopeless and unsatisfactory condition than ever before.

"And whereas the general conditions of the industry have not improved since the slight increase has been effected. The competitors of the Canadian mills are reducing prices, which more than counterbalance the benefit of the tariff change, and the importations, especially in lines of cheap cloths, continue to increase.

"And whereas the greater difficulty is experienced in securing and retaining with the wages available even a limited number of workers necessary to keep a part of the mills in operation.

"Therefore resolved :

"That the woollen section of the C. M. A. request the association assembled in annual meeting, to bring the strongest pressure to bear upon the Dominion Government to grant a sufficient increase to afford it relief.

"2. That this increase should be made at once if the industry would be saved.

"3. That it should apply not only to certain lines of woollen cloths, but equally to all classes of woollen goods manufactured in Canada."

The association also put itself on record in regard to trade preference as follows:

"That, whereas, the events of recent years, industrial, political and international, indicate that the future strength and safety of the British Empire depend upon the closer union of all its parts.

"And, whereas, the time has come when the Mother Country and the Colonies should extend to one another some practical expression of such union.

"Therefore, be it resolved, that this association, in convention assembled, reaffirms its belief in an imperial trade preference and favors the appointment of an Imperial commission representing all British dominions, who shall consider the whole question and submit a plan for the consolidation and permanency of the Empire and its trade."

The report of the fire insurance committee, presented by Mr. J. P. Murray, went very fully into the question indicated in its title, discoursing on the high insurance premiums and their unstable nature, going fully into the question of the profits of the companies and their expenses. A remedy for the evils was recommended in the following form which, after some discussion, was adopted:

"Your committee recommend that the executive council of the association be authorized to consult the branches of the association and to appoint a fire insurance committee as outlined herein; to prepare a plan for fire insurance and submit the same to the executive council of the association for approval, no plan to be considered which in any way affects the funds of the association."

The details of the recommendations submitted by the committee read as follows:

"The department shall be controlled by a standing committee of the association to be known as the insurance committee which shall report monthly to the executive council, and annually to the annual meeting. The committee shall be composed of twenty-one members. Seven members of the committee shall be elected at each annual meeting, and hold office for three years, and shall be eligible for re-election. In centres where there are eight or more members of this association, advisory committees shall be organized at the discretion of the insurance committee.

"The department shall be organized to carry on the business (a) of mutual fire insurance, and (b) of insurance brokers.

"In order to increase the desirability

of the policies issued by the department, as many risks as can be obtained (provided they are satisfactory to the department) will be accepted. No manufacturing risks will be accepted unless the manufacturers are members of the Canadian Manufacturers' Association. All warehouse, dwelling, and non-manufacturing property irrespective of ownership will be insured under the same conditions as manufacturing risks.

"Every risk before being insured by or with the insurance department must be approved of by the insurance committee.

"To avoid the necessity at the outset of an expensive inspection department the rate of premium charged will be the same rate as is charged at the time the insurance is effected by any company that is acceptable to the committee, and the usual conditions regarding co-insurance will also be adopted.

"The department will aim among other things to encourage the insuring public to protect their own property, and as an inducement, sprinkled and properly protected risks will receive special consideration.

"In addition to the insurance carried by the department, arrangements are expected to be made with several first-class Canadian, English and United States companies, whereby an insurance amounting to several times the amount carried by the department may be placed. The commission on this insurance will be credited to the department to increase the fund available for losses.

"In addition to the cash premium paid to the department, the policy holders shall also bind themselves by the acceptance of a policy to be responsible for all losses suffered by the department over and above the amount of premiums collected to an amount sufficient to make the policies absolutely safe.

"No agents will be employed by the department. The insurance will be secured through the head and branch offices of the association, and through the individual efforts of the interested members.

"The department will at the end of each year set aside a percentage of profits to be decided upon for a reserve fund to increase the security and lessen the guarantee of policy holders.

"The department will begin business just as soon as it has insurance contracted for to the amount of \$1,000,000, provided that legal authority has been obtained by that time. An effort will be made to have in addition to this \$1,000,000 a large amount of insurance to place in other companies, on which the department will receive a commission."

How it Will Work Out.

The committee submitted an estimated statement, figured on the basis of

\$5,000 on each risk, the department carrying half and reinsuring half. The result gives a balance of \$7,000 in favor of the department out of \$40,000 earned on policies of \$2,000,000, half being reinsured. This \$7,000, it is claimed, is straight excess over the amount at the disposal of the line companies for the same losses on the same business.

The executive committee will arrange for the carrying out of the plan.

Election of Officers and Committees.

The election of officers was then proceeded with, with the following results:

President—W. K. George, Standard Silver Co., Toronto.
First Vice-President—C. C. Ballantyne, Sherwin-Williams Co., Montreal.
Ontario Vice-President—J. O. Thorn, Metallic Roofing Co., Toronto.
Quebec Vice-President—Geo. E. Amyot, Dominion Corset Co., Quebec.
Nova Scotia Vice-President—D. W. Robb, Robb Engineering Co., Amherst.
British Columbia Vice-President—John Hendry, British Columbia Mills Timber Trading Co., Vancouver.
Manitoba Vice-President—E. L. Drewry, Winnipeg.
Prince Edward Island Vice-President—Bruce Stewart, Bruce Stewart & Co., Charlottetown.
Treasurer—George Booth, Booth Copper Co., Toronto.

The officers for the standing committees resulted as follows:

Standing Committees.

Railway and Transportation.

Chairman—H. Cockshutt, The Cockshutt Plow Co., Brantford.
Vice Chairman—W. P. Gundy, The W. J. Gage Co., Toronto.

Commercial Intelligence.

Chairman—A. S. Rogers, The Queen City Oil Co., Toronto.
Vice Chairman—Thos. Roden, Roden Bros., Toronto.

Parliamentary.

Chairman—F. B. Polson, The Polson Iron Works, Toronto.
Vice Chairman—G. W. Watts, The Canadian General Electric Co., Toronto.

Tariff.

Chairman—W. K. McNaught, American Watch-case Co., Toronto.
Vice Chairman—Geo. E. Drummond, Canada Iron Furnace Co., Montreal.

Reception and Membership.

Chairman—Robt. Crean, Robt. Crean & Co., Toronto.
Vice Chairman—L. V. Dusseau, The Gendron Mfg. Co., Toronto.

Industrial Canada.

Chairman—A. W. Thomas, The Copp, Clark Co., Toronto.
Vice Chairman—Geo. A. Howell, Grip Limited.

The election of the officers of the local branches at Toronto and Montreal resulted thus:

TORONTO.

Chairman—R. A. Donald, the Pure Gold Mfg. Co.
Vice-Chairman—W. B. Tindall, the Parry Sound Lumber Co.
Secretary—J. F. M. Stewart.

MONTREAL.

Chairman—J. J. McGill, Montreal.
Vice-President—Lieut.-Col. J. H. Burland, Canada Engraving and Litho. Co.
Secretary—E. H. Cooper, B.A.

The retiring president in a few happy words at this point abdicated in favor of the new chief, Mr. W. K. George, who aptly expressed his appreciation.

Quebec Next Place of Meeting.

Suggestions for the next place of meeting were then called for. Mr. S. A. Vaudry moved in favor of Quebec, which received the approval of the convention, and although left to the executive for ratification will undoubtedly be adopted.

Amid votes of thanks and responses, the active work concluded by the singing of the National Anthem.

Afternoon Recreation.

At one o'clock, at the invitation of Mr. Geo. E. Drummond, the delegates and their ladies boarded a special train for his Summer residence, where a magnificent reception was given them. A return was made in time for the evening banquet at 8 o'clock.

The New President.

Mr. W. K. George, the new president, was born at Kingston in 1851. After a High School education at Kingston he attended the University of Toronto. After a widespread commercial experience at Winnipeg and Chicago, he established the Standard Silver Co. at Toronto 10 years ago, of which he is president.

The Banquet.

Never in the history of the association has there been such a banquet as that which concluded the business sessions on Thursday night. Never have so many gifted orators been grouped together round a banquet table. Never have such enthusiastic and patriotic speeches been delivered.

Sir Wilfrid Laurier, the Prime Minister of the Dominion, was there. Hon. George W. Ross, the Premier of Ontario, was present. Sir Howard Vincent, the distinguished visitor from the Mother Land, was an honored guest. Hon. C. H. McCarthy, of Trinidad, another statesman of the Empire, represented the sister colonies of the West Indies, and Hon. George E. Foster, one of Canada's most gifted speakers, delighted his hearers once again.

At eleven o'clock Chairman W. K. George rose to propose the toast to the King. This was followed by the reading of an address of appreciation to ex-President Cyrus A. Birge of Hamilton, who replied in a fitting manner.

Sir Wilfrid Laurier.

Sir Wilfrid Laurier in proposing the toast to "Canada and the Empire," said in part:

"Canada and the Empire" is a very large subject, especially at 11.30 p.m. (Laughter.) It would need, sir, to do justice to it, much more time than I have at my disposal. The history of

the British Empire as it exists to-day is a creation of comparatively modern growth; it does not extend beyond the end of the eighteenth century, and it is a remarkable fact that the portion of its history of which we are proudest dates from the day when the fortunes of England were at their lowest ebb—from the days of the conclusion of the American War of Independence. When the war for the independence of the colonies was concluded, when the treaty of peace was signed, in 1783, apart from Newfoundland, apart from a few islands in the West Indies, the colonial possessions of Great Britain were confined simply to this colony here on the banks of the St. Lawrence, which had been peopled by a people not of English origin, which had been settled by a country that had been England's chief rival in history, which had been brought under the domination of England only some twenty years before, but a people which remained true to British allegiance when British allegiance was assailed and deserted by those of her own kith and kin on this continent (Cheers.) From that date, however, England's direst distress commenced the days of England's brightest fortune. Since that date, and within the short space of 100 years, England has acquired, either by conquest, discovery or colonization, and more by discovery and colonization than by conquest, India, Australia, New Zealand, South Africa, Mauritius, Ceylon, Malta, Jamaica, and scores of islands in all seas and in all climes, which dot the whole globe with the colors of Great Britain. (Cheers.)

How mysterious are the ways of Providence! Who could have supposed that England, her colonial empire rent with war, when she had been deprived of the greater part of her empire on this continent, who could have supposed that in less than one hundred years England would have become the greatest colonizing power the world has ever seen? Who could have supposed that in less than one hundred years England would build up an empire greater than the empire of Rome in its palmyest days? Yet, sir, the dream of those days has become a mighty reality, of which we are the living witnesses. (Cheers.) To-day that empire is second to none in the world, and has been equalled but once in the whole course of history.

How to Maintain it.

Now, the question has been asked, and is asked to-day, it has been asked many and many a time by both friends and foes, by friends with anxiety, by foes with jealousy, "How can this mighty empire be maintained and kept together, and kept so close as it is under the sway of the empire of Britain?" Sir, this question need no long-

er be asked. It has been answered long ago, some sixty years ago, when the principle was introduced of local autonomy and legislative independence in all the constituent parts of the British Empire. (Applause.) The Empire of Rome fell under the weight of its own concentration, but the Empire of England exists by freedom, by local autonomy and by legislative independence. The Empire of England is a galaxy of living nations now. Rome was the mother of dead empires; England is the living empire of young nations. (Cheers.) Sir, the answer is not perhaps satisfactory. Men will still inquire, after all, "What is to be the new feature if there is to be one?" I do not propose to go into this question to-night, but let me say, and perhaps I am in so saying anticipating an objection, or, perhaps, not an objection, but that which is in my mind is that it has been suggested that a bond of union will be found in uniformity of tariff for the whole British Empire.

Mutual Concessions.

Well, sir, for my part, I cannot see that uniformity of tariff is good for the British Empire. The differences of civilization, of climate and production and of conditions make it impossible that you could have in Canada the same tariff as in India, the same tariff in India as in Australia, and the same in Australia as in South Africa. But what is possible, I believe, what is possible is that we can have between the motherland and the colonies treaties of commerce, if I may so speak, treaties of commerce—and the expression is not too strong or extravagant—between the motherland and the colonies, whereby we can sit down by mutual concessions and by the giving on the one side and on the other of mutual concessions we can develop the trade of Britain and her colonies to the mutual advantage of all. (Cheers.) I am well aware that this cannot be done without difficulty. We have some views in Canada, they have their views in Great Britain. My friend, the chairman, will permit me to say, as I have already said—this is a freer country than Great Britain—that, perhaps I will not endorse every word and every syllable that he has uttered; perhaps I will make exceptions, although not perhaps a great deal, to what he has said. I am well aware we have had difficulties in the past. We have some views in Canada; they have theirs. We cannot have the same tariff in Canada as in Great Britain. What they may have in Great Britain is their own lookout. It is for them to determine what they will have. But when they have chosen their policy it will always be possible to sit down and come to some conclusion, whether by granting con-

cessions that we still more extend the relations that exist between them.

Sir Howard Vincent.

Sir Howard Vincent followed Sir Wilfrid. He received a great ovation in a round of cheers. He began by saying that the committee in charge had shown a keen appreciation of the circumstances in coupling the names of men from different parts of the empire to respond to this toast. The Manufacturers' Association were to be congratulated on the stand they had taken with regard to preferential tariffs in favor of Great Britain. Sir Howard was certain if the association should carry out their intention to visit England next year, they would be welcomed with open arms. "Made in Canada" was a motto to be proud of, the proud product of a boundless land. "The boys that are grown in Canada are the boys to whom Britain holds out the hand." Regret was expressed that Hon. W. S. Fielding was not present, but he hoped that the Minister of Finance would live for a thousand years, but no greater monument could be raised to him than the words he said in Parliament in July, 1898, when he announced that on the morrow British goods would enter the Dominion under a preferential tariff. There had been no bickering or badgering with the British people; no obstacle was put in the way. The preference was a generous act, and after this no one could say that Canada made no offer. "You are, Sir Wilfrid," said the speaker, turning to the Premier, "a man of silver speech, but you have given deeds not words. You did not make offers. The people at home are deeply grateful to the people of Canada, and will spare no effort to offset the difficulties that beset their path towards reciprocity." Sir Howard concluded with a very hopeful forecast of Canada's future.

Trinidad's Representative.

Hon. Mr. McCarthy responded also, but as he was the only person present from Trinidad it was no time for him to discuss why the trade between Canada and the West Indies had not been more than \$2,500,000 each way; but he would say that when the manufacturers of Canada were looking for a new market for places to do their "dumping," the West Indies would be found worth looking after. The desirability of greater trade between the British western colonies was undoubted. Mr. McCarthy concluded by forecasting free trade between Canada and the West Indies, but

he would advise beginning with one of the components of the West Indies at a time.

Hon. Mr. Foster Disappointed.

Hon. Mr. Foster, at the outset, in a characteristic vein, humorously gave promise of a brief speech, because he did not wish to keep Hon. Mr. Ross at the point of "splendid isolation." But he managed to make a considerable effort. He said that he had been glad to again hear Sir Wilfrid Laurier, but he had been disappointed because the Premier had seen it wise not to tell the captains of industry what he was going to do as regards the tariff. But he had been pleased to hear that the Premier was not afraid to express himself as not opposed to treaties of preference within the empire. He concluded with a truly eloquent peroration on Canada and her position in the empire.

Hon. G. W. Ross.

The toast to "Canadian Industry and Commerce" was ably proposed by Hon. George W. Ross and his speech was filled with excellent material. Mr. Ross went down to practical facts and built up a splendidly logical fabric. He urged Canada to hasten the development of her latent resources, and to supply her own wants, without needing to have recourse to foreign markets. With regard to the question of reciprocity with the United States, he claimed that it was the United States who were apparently hostile to increasing their trade with Canada. As for a treaty he thought it was entirely unnecessary.

"In dealing with preferential trade with Great Britain, I would adopt a similar mode of procedure. I would not ask Great Britain to make any bargain with us with regard to inter-imperial trade. If it suits us for commercial or patriotic reasons to give British goods a preference in the Canadian market, then a preference they shall have, and they shall have it in no grudging spirit, and in no stinted measure, the only limit being that of expediency as a business proposition. (Applause.) If, on the other hand, Great Britain, in her wisdom, and combined with her anxiety to unify the empire, give to us, her own kith and kin, a preference which she does not give to the foreigner, let her do so in the exercise of her sovereign right and as a proof of her affection for the sons and daughters who, though they may have left her knee, have not ceased to love her."

The toast was responded to by Mr. Monk and Hon. Wm. Paterson.

"Our Guests" was proposed by the new vice-president, Mr. C. C. Ballantyne, and was responded to by Sir Lloyd Wise and Mr. F. H. Medhurst.

THE "EASY" DOUGH MIXER.

Lewis Bros. & Co., have for sale the "Easy" dough mixer which kneads bread in any bread-raising pan, without putting the hands in the dough. This mixer is expected to have a wide sale.

WILL REBUILD FOUNDRY.

James Reid, founders and machinists, Perth, whose foundry was destroyed by fire last week, have decided to rebuild a much larger foundry in Perth.

FROTHINGHAM & WORKMAN'S CATALOGUE.

Frothingham & Workman, Montreal, are engaged in the preparation of a large new catalogue of eight or nine hundred pages. It will be of the same size page as the catalogue of the Russell & Erwin Mfg. Co., with which the trade are well acquainted; that is the page will be 10½x7½. The firm are considering the advisability of issuing it in loose leaf form. It will probably be issued within a year.

CARNEFAC STOCK FOOD CO.

Among the stock food exhibits in the machinery building a very creditable one was that of the Carnefac Stock Food Co. The exhibit was displayed on a stand just at the entrance to the building and attracted considerable attention. That this stock food is appreciated may be gathered from the fact that the entire exhibit was purchased by a local firm of feed merchants (Adam & Tauntons).

The Manitoba Gypsum Company, Limited, Winnipeg, have been incorporated. The chief object of the company is to acquire the property, plant and business of the Union Cement Company, who are working gypsum beds on Lake Manitoba. Other general powers are also granted in the charter. The men at the head of the new company are C. W. Sharp and Hugh Sutherland, of Winnipeg; B. C. Mason, banker, Kansas City; W. J. Holahan, real estate dealer, Mason City, Iowa; T. A. Potter, Iowa, and James Fisher, barrister, Winnipeg. The capital stock is placed at \$450,000.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Sept. 22, 1904.

Hardware.

EVERY week now materially shortens the season marked by the close of navigation, in which hardware dealers expect a very large turnover in trade. The present week has found business somewhat quieter. Fall fairs are not without their influence, but it is believed that the present falling off is mainly due to the uncertainty regarding the harvest. This is true particularly in the west, where dealers are holding back until authentic results of the wheat crop are known.

Prices continue steady with very little change. The reduction noted recently in galvanized staples no longer holds, and they are now quoted at \$3 per hundred pounds. The wire nail situation has not cleared and the general cement business is behind the anticipated volume.

Food Choppers—An active business is being done. We quote, smallest size \$1.05 each net; medium family size \$1.20 each net; large family size \$1.35 each net.

Corn Cutters and Huskers—The demand continues brisk. We quote as follows: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Harvest Tools and Lawn Mowers—As mentioned last week the present list and discount for these are confirmed for next season.

Agricultural Wrenches—Business has fallen off somewhat in these lines. Prices continue as follows: 6 in., \$2.85 a dozen 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Grindstones—An average business is being done. We quote: 40 to 200 lbs., 2 in., and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in. thick and over, \$1.20; 11-2 in. thick and under 2 in., \$1.30.

Skates—The volume of orders for skates this week was hardly up to the mark, but the near approach of cooler weather is expected to increase the sales very largely. We quote as fol-

lows: Halifax pattern, plain, 38c a pair; nickeled, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50 nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concaved \$1.60 a pair.

Lanterns—The demand for lanterns is fairly good. We quote: Cold Blast, \$7 a dozen; No. 0 Safety, \$4 a dozen.

Sleigh Bells—The season for orders has opened up well and is very promising. We quote as follows: Brass team bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

Shovels—There is a brisk tone to the shovel market. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Washing Machines—Little business reported during the present week. We quote: Round (three legs) \$35 per doz.; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Heavy Screw Hooks and Hinges—Merely a nominal trade is being done. We quote: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—A slight falling off in the demand for annealed wire is reported this week, although business in this line is still good. We quote: \$2.25 per hundred lbs.

Barb Wire—A fairly active demand continues. Prices remain unchanged. We quote: \$2.75 per 100 lbs. f.o.b. Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

Galvanized Wire—The reduction in galvanized wire which was made recent-

ly still holds. Business is fair. We quote as follows: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 8 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—An advance in price from last week's quotations is noted for galvanized fence staples. They were quoted at \$2.85 and the price this week, as noted, is \$3. Our quotations are: \$2.65 per hundred lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—Business continues steady with no change whatever in price. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Screws—As usual these are in active demand, particularly to fill up sorting orders. Supply is none too large. Discounts are: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—The demand continues good. Quotations are as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Cut Nails—No change in the market.

Quotations are: \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Pressed Spikes—A fair amount of passing trade; discount remains as before, 25 per cent.

Horseshoes—The horseshoe business is in a healthy condition. Orders are coming in in large numbers for shipment before the close of navigation. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—In common with horse-shoes, trade continues fairly good. Our quotations on list price: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. Other brands 55 and 57 1-2 per cent off list.

Shot Guns and Rifles—The Fall business in these lines has let up somewhat during the present week, but is still fairly good. Prices remain the same and are to be had on application.

Ammunition—A fairly lively business is reported in all lines of ammunition. The shortage in Canadian loaded shell has been caught up with to a considerable extent.

Shot—An active market is reported. We quote as follows: Standard, \$6.50 per hundred lbs.; chilled, \$7 per hundred lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Roofing Pitch—No change whatever. The price remains as before, \$1 per cwt.

Building Paper—Manufacturers report merely a nominal trade and hardly what was expected for Fall business. We quote: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—A fair volume of business is being done. We quote as follows: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement—This has been a disappointing season in the cement business, inasmuch as a particularly dull Summer has been followed by none too active Fall trade. We quote: English, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel, ex store; and American, \$2.15 to \$2.35, ex cars.

Coil Chain—The market is still weak and the demand is slight. We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-3 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on earlots.

METALS.

A healthier tone pervades the metal market this week as the demand is slightly better than formerly. This and the next few weeks are considered the best of the year for the metal market, and indications point that such is to be the case this season. Little import pig iron is moving, but the local market is more active. An active market continues in bar iron, tool steel, merchant steel, Canada plates, black sheets, and galvanized iron. Copper and tin are both very firm and an advance of one quarter cent is noted in copper, while a further advance in both is fully expected, the latter having advanced considerably in primary markets. Lead continues firm and ingot zinc steady. Scrap metals remain unchanged with very little demand although prospects are reported to be somewhat better.

Pig Iron—The local market is more active than it has been for some time past, but very little import business is being done. Prices remain unchanged. We quote:

"Disc." No. 1.....	\$17.50	delivered Montreal
"Dom." No. 1.....	18.50	" "
Usual difference in price for lower grades.		
Ferrona No. 1.....	\$18.00	delivered Montreal.
" No. 2.....	17.50	" "
" No. 3.....	16.50	" "
" No. 4.....	16.00	" "
Londonderry.....	\$18.50 to \$19.00	delivered Montreal.
Summerlee.....	18.50	" "
Glengarnock.....	20.00	" "
Gartsherrie.....	19.25	" "
Carnbroe.....	18.50	" "

Carron No. 1.....	19.00	delivered Montreal.
(special).....	17.50	" "
Ayresome No. 1.....	17.50	" "
" No. 3.....	16.90	" "
Clarence No. 1.....	16.25	" "
" No. 3.....	16.00	" "

Bar Iron—Business is unusually brisk in bar iron at present and is expected to continue so until the close of navigation. There is still a scarcity in some sizes. We quote: Merchants' bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

Tool Steel—The market continues steady and business fairly good. Our quotations are as follows: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Merchant Steel—Little change is reported in Merchant steel, market fair-active. We quote as follows: Sleighshoe, \$1.77 1-2; tire, \$1.87 1-2; Spring, \$2.75; toe calk, \$2.37 1-2; machinery (iron finish), \$1.97 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.77 1-2; rivet, \$1.82 1-2.

Canada Plates—These are in good demand. There is a weaker tendency shown this week but prices remain same. We quote as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—These are also reported brisk with the market none too strong. Prices remain unchanged. Our quotations are as follows: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—The demand is brisk with no change in price. Our quotations are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95. In less than case lots, 25c extra.

Sheet Zinc—Sheet zinc remains unchanged with a steady market. We quote case lots \$6.25 to \$6.50 and small quantities \$6.50 to \$6.75.

Tin Plates—Rather quiet with a firm market. We quote: Cokes, \$3.75; charcoal, \$1.

Ingot Tin—There has been considerable advance in the primary market and although no change of price is quoted this week, higher quotations are expected. Quotations are 30 1-2c to 31c.

Ingot Copper—Copper has advanced one-quarter cent per lb., with still a strong upward tendency and every indication of a further advance. We quote: 13 3-4c to 14c, the former prices being for large quantities only.

Pig Lead—Pig lead continues firm with no change. We quote: \$3.25 to \$3.35.

Scrap Metal and Old Materials—Scrap iron continues rather quiet being in very little demand, although the prospect for the near future is a little brighter. The feeling is that this market has seen its worst and a change for the better is expected. As woollen mills are still slack there is very little demand for woollen rags. Quotations are: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

ONTARIO MARKETS.

Hardware.

Office of HARDWARE AND METAL,
10 Front Street East.
Toronto, Sept. 23, 1904.

BUSINESS continues satisfactory. The majority of the retailers are busy with Fall lines such as stoves, window glass and putty, nails, cow chains, horse blankets, etc. There is also a fair demand for shelf hardware as well as sleigh bells, skates, hockey sticks, etc. Wholesale houses report that the aggregate volume of business is even larger this year than was the case last year.

There is no change in prices yet throughout, though there is a stiffening in value of some lines as a result of the anti-dumping tariff.

Lawn Mowers—The following quotations for 1905 have been issued by the manufacturers. Quotations to hand are: "Woowyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt"

10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discounts 50 per cent. with freight concessions in quantity shipments.

Sporting Goods—Retailers are taking into stock Fall sporting goods of all kinds while inquiries for skates, hockey sundries, etc., keep strong.

Ammunition—British ammunition firms are not losing ground here as a result of the "dumping" clause as United States shippers are. We quote: American rim fire cartridges, 30 and 2 1-2 discount from list; American centre fire, 5 per cent. advance on list.

Harvest Tools—Trade is over in this line for the season. There are, however, a few lines of Fall goods still selling. The discount is 60 per cent. off.

Washing Machines—A fair trade is doing. Prices are unchanged. Our quotations are as follows: Round reacting washer, per dozen, \$56; square reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Woodenware—We quote: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2.00; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

Chain—An improvement is noted in the demand this week. We quote: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Barb Wire—There is still some trade doing. We quote as follows: \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—A limited trade is reported. Our quotations are as follows: No. 5, \$3.45; Nos. 6, 7 and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4, Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Trade is very quiet. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other

points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—Nominally prices remain unchanged at \$2.45 per keg f.o.b. Toronto, with car loads at \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are: "C" brands, 40 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—A very steady demand keeps up. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—A steady and brisk demand continues. Prices remain unchanged. We quote: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—There is a very fair trade being done. Prices are unchanged. We quote as follows: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—There is no change in quotations on this market. There is a fair amount of trade being done. We quote: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sashcord, "Hercules,"

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

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Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—The demand on this market still continues to increase. Dealers claim there will not be any surplus stock as the demand is fully equal to the supply. Everything is firm with an unchanged price list. We quote: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Firebrick—The demand on this market continues to be the same. Trade is inclined to be quiet. Prices are unchanged. Our quotations are: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Cement—As the building trade is once more in full swing the demand for this article has increased during the week and the outlook is for a brisk demand, fully equal to the supply till the end of the present building season. Outside trade has also been brisk. We quote the following prices: Canadian Portland, \$1.70 to \$2; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex store; American Portland, \$1.70 to \$2 f.o.b. Toronto.

METALS.

The volume of business continues large, the demand for sheet metals being especially satisfactory. There is no change in quotations, though, as will be seen by our London Metal Market report, prices on tin, copper and lead continue to advance in primary markets.

Pig Iron—A good demand for pig iron continues. While the bulk of the business is being handled by Canadian furnaces there is still considerable importing. We quote:

Middlesboro, f.o.b., Toronto.....	\$18 70
Hamilton, No. 1	17 50 to 18 00
" No. 2	17 00 to 17 20
" No. 1, Hamilton	16 25 to 16 55
Midland, No. 1	16 00 to 16 25
" No. 2	17 00 to 17 25
" No. 1 f.o.b. Midland.....	16 25 to 16 75
Radnor, f.o.b. furnaces.....	27 50
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—A fair trade is doing with prices steady. Our quotations are as follows: \$1.75 f. o. b., Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and

Sheet Zinc Sheet Copper

and other Metals.

From Stock or for Import.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.



**Enterprising
Hardwaremen**
handle our
**ANTI-FREEZING
PUMPS.**

They know that the sale of a good Pump brings about the sale of many other things from satisfied customers.

Do you handle our PUMPS?

Write for catalogue and prices.

The R. McDougall Co., Limited
GALT, ONTARIO.

"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel

for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

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D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—Prices are locally unchanged though there has been an advance in primary markets. We quote from 30 to 31c.

Galvanized Sheets—A good steady movement is reported. Prices are steady. We quote as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tin Plates—An excellent demand continues, with prices steady. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—Prices have risen in London but are unchanged here. A good demand is reported. We quote in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—This market is more active this week. Discounts are steady at 15 per cent.

Lead—A steady trade continues. We quote: \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—There has been a falling off in demand during the week. Prices are from 53-4c to 6c per lb.

Solder—This market has picked up and is active. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—There is a good demand.

PETROLEUM.

Prices have not changed during the week under review. Demand continues to be steady. Prices quoted by us are: Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 18 1-2c ex warehouse.

Clearing Sale

—OF—

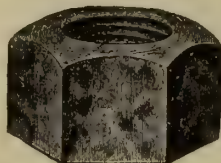
Fencings and Nettings.

Our remaining stock is FOR SALE at VERY LOW prices. Having disposed of our weaving machines, we are closing up the business of this company.

This is the LAST CHANCE to obtain a supply of the best nettings ever offered on the Canadian market.

We will be pleased to quote you prices, etc., on application.

THE ONTARIO WIRE FENCING CO., Limited, PICTON, ONT.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs Etc. Cold Punched Nuts of every variety of finish.

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Make Your Own Springs Auto Hand Spring Winder

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Brand Galvanized Sheets

are of high quality, but LOW in price—for a guaranteed sheet.

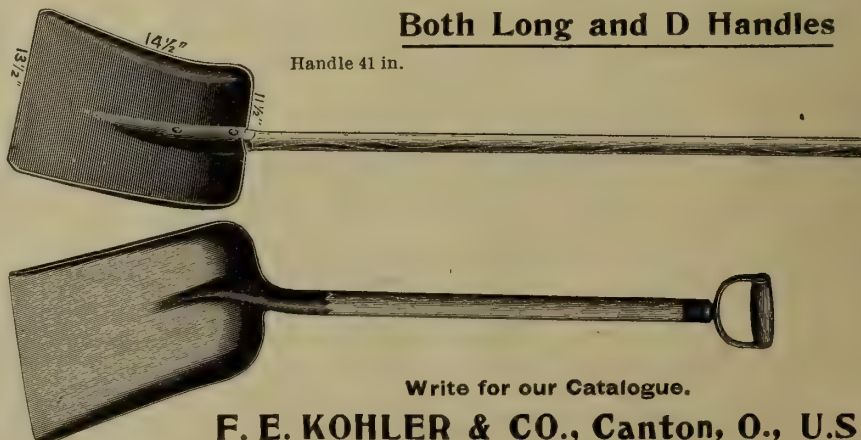
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Pontardawe, South Wales.

MONTREAL.

SNOW SHOVELS, FURNACE SCOOPS

Both Long and D Handles

Handle 41 in.



Write for our Catalogue.

F. E. KOHLER & CO., Canton, O., U.S.A

THE PITTSBURG METAL MARKET.

From the Iron Trade Review, Sept. 22 1904.

Pig Iron—The Westinghouse Electric and Mfg. Co. last week purchased 8,000 tons of foundry iron for delivery to its Allegheny and Cleveland plants. Seven thousand tons went to northern furnaces while 1,000 went to southern operators. On the southern iron, contracts were closed at \$9 and \$9.25, for delivery the remainder of the year, these prices being made despite the quotations of the majority of the southern stacks that are holding firm at \$9.50 for No. 2. The iron for the Cleveland plant was divided between two furnaces at that place at prices approximating \$12.35. For Allegheny delivery about \$12.60 was done. The National Tube Co. also purchased 2,500 tons of forge, largely southern, which was sold on the basis of \$8.75, Birmingham. This week the Westinghouse Air Brake Co. is in the market for 2,000 tons of foundry iron, while the Standard Sanitary Mfg. Co. is in the market for 7,500 tons of foundry and forge iron for its various plants for delivery last quarter. Bessemer iron for prompt delivery can be had at \$11.75, Valley furnace, while on forge iron the outside price is \$11.85, Pittsburgh. On northern No. 2 foundry \$12.50 can be done for prompt shipment. We revise quotations as follows:

Bessemer, Valley	\$11 75 to	\$11 90
Bessemer, Pittsburgh	12 60 to	12 75
No. 1 Foundry	13 00 to	13 25
No. 2 Foundry	12 50 to	12 85
Gray forge, Pittsburgh	11 75 to	11 85
Chilled basic, Valley	11 75 to	11 75
Chilled basic, Pittsburgh	12 50 to	12 60

Steel—At a meeting of the billet association held here on Monday, September 19, a \$3.50 reduction was made on 4x4 billets on a Pittsburgh basis, while the reduction on sheet and tie bars is only \$2.50, the spread between the two having been increased from \$1 to \$2 a ton. This action was expected, as there are no large producers outside of the Carnegie Steel Co., Jones & Laughlin Steel Co. and the Sharon Steel Hoop Co., and the market can be maintained without difficulty. Instead of absorbing a portion of the freight as heretofore, quotations are made f.o.b. mill, Pittsburgh, plus the actual freight to the point of destination. As a result of this new arrangement, the reduction on billets and bars at such centres as Chicago, Cleveland, New York and Philadelphia is not as large as at Pittsburgh. This is more clearly shown by the following table:

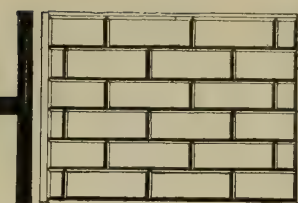
	Old price.	New price.	Freight.	Reduction.
Chicago	\$24 00	\$22 50	\$1 00	\$1 50
Cleveland	23 50	20 90	1 00	2 60
New York	24 75	22 10	2 60	2 65
Philadelphia	24 75	21 90	2 40	2 85
New England points	25 25	22 50	3 00	2 25
Pittsburg, f.o.b. mill	23 00	19 50	....	3 50

While Youngstown and Wheeling take the Pittsburgh base, shipments from these points must include the freight from Pittsburgh. Despite this rearrangement, delivered prices are to be quoted as heretofore, a uniform list to be used by all producers being now in preparation.

Structural Material—The American Bridge Co. received the contract for a large power plant in New York calling for 11,000 tons. The McClintic-Marshall Construction Co. was also awarded a contract this week for the steel for repair shops for the B. R. & P. railroad amounting to about 700 tons. Specifications on structural shapes are being received more freely and most of the mills are operating in full. We make the following quotations: Beams and channels, up to 15 inches, 1.40c; over 15 inches, 1.50c; angles, 3x2 up to 6x6, 1.40c; zeos, 1.40c; tees, 1.45c; angles, from 3 to 16 inches, 1.40c; universal and sheared plates, 61-4 to 24 inches incl., 1.30c; over 24 inches, 1.40c base.

Bars—At a meeting of the merchant bar association held in this city on Monday, the entire bar schedule was reduced \$1 a ton. This places steel bars on the basis of 1.30c, which really amounts to no reduction at all, as the contracts made last Spring were on this basis and will not expire for six months. Consumers contracting on the basis of 1.35c will get the advantage of this reduction on the tonnage not yet delivered, as quotations were guaranteed against decline. This puts bars back to the basis fixed last November when a reduction of \$6 a ton was made. We revise quotations as follows: Bar iron, 1.25c to 1.30c, Pittsburgh; hoops, 1.55c, and bands 1.35c, both taking bar extras. Bessemer and open-hearth steel bars, 1.30c; plow and cultivator beams, 1.30c, net; channels, angles, zeos and tees, under 3 inches, 1.40c; the following differentials are maintained on steel: Less than 2,000 pounds of a size and not less than 1,000 pounds, 10 cents advance; less than 1,000 pounds of a size, 30 cents advance.

Wire and Wire Nails—Demand continues heavy, additional departments having been placed in operation at South Sharon this week.



OUR SHEET STEEL PRESSED BRICK

Is an ideal covering, either for new buildings or improving old ones.

IT IS VERY EASILY AND QUICKLY APPLIED,
GIVES PERFECT WEATHER PROOF PROTECTION,
IS FIRE, LIGHTNING AND RUST PROOF
AND COSTS VERY LITTLE.

Consider its fine appearance—its splendid enduring qualities—and slight expense—and decide to serve your own best interests by using it.

Fulllest details of information in our catalog.

METALLIC ROOFING CO., LIMITED,
Wholesale Manufacturers,
TORONTO, CANADA.

Merchant Steel—Demand for merchant material is heavier, the reduction on the merchant bar card only affecting tire steel which is off \$1 a ton. We revise quotations as follows: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.50c to 1.55c; plow steel, 6 inches and under, 1.35c for Bessemer and open-hearth; plow slabs, 1-4 inch and heavier, 1.60c. Drawn and cold rolled shafting is held at 52 per cent. off in carload lots and 47 off in less than carload lots.

Pipes and Tubes—Demand for merchant pipe continues light for this season of the year and the regular card rate is being shaded one point by some of the independent mills. Nearly all of the mills are working on large orders of line pipe which makes up to some extent the falling off in the tonnage of merchant pipe.

Coke—The H. C. Frick Coke Co. is now operating 88 per cent. of its ovens in the Connellsville region and is also buying coke in the open market to some extent. Prices to independent producers have not improved materially, however, and are held at \$1.35 to \$1.40 for furnace coke, while foundry coke is quoted at \$1.75 to \$1.85. The H. C. Frick Coke Co. expects to have 200 of its new ovens in the upper Connellsville basin in operation early in November while the remaining 800 ovens under construction will be completed early next year. For the week ending September 10, the production of the upper region amounted to 194,761 tons and the lower 58,200 tons.

Merrick, Anderson & Co.

NORTHWEST DISTRIBUTORS

WINNIPEG.

"Hot Blast"

Line for Coal.

For Soft, Hard or Lignite Coal, Coke, Etc.

Made by the D. Moore Company,
of Hamilton.

Heavy draw
centre
shaking
grate and
lining.
Heavy or-
namental
legs and
base.

STRATHCONA HOT BLAST

KNOWN EVERYWHERE

MANITOBA DEPOT

Merrick, Anderson & Co.
117 Bannatyne St. East, - Winnipeg.



STRATHCONA DOUBLE HEATER

No.	Diameter of Body.	Approximate Shipping Weight.
1115	15 inches.	134 pounds.
1118	18 "	174 "

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL

Room 308 McIntyre Block,

Winnipeg, Sept. 19, 1904.

FOR the past week the weather has been very unpropitious, and has to a large extent stalled threshing operations throughout the Northwest. The first car of No. 1 hard which arrived in the city the other day was pronounced by the members of the Grain Exchange an excellent sample.

The strike of the boilermakers on the C.P.R. has been settled by the company granting them higher wages. This is fortunate, as a tie-up of the C.P.R., even if but temporary, would have been a serious matter with the big wheat crop starting to move.

A. McBain, contractor, Winnipeg, has under way a contract for a \$28,000 Baptist church at Brandon and one for an addition to the First Baptist Church, Winnipeg, to cost a similar sum.

The Minister of the Interior has made arrangements for another Mennonite settlement in townships near Swift Current, Assiniboine. As other Mennonite communities have proved a success this will be pleasing to Swift Current merchants.

The Canadian Westinghouse Electrical Apparatus Company, of Hamilton, Ont., have located a branch in Winnipeg, and will open in the Union Bank building. Temporary offices have been established in the Canada Life building. A contract for arc and incandescent street lights has just been secured, and W. E. Skinner, Winnipeg manager, says the firm now need to carry a big stock here. The largest order ever filled by the company for stationary motors is now being worked on for the new Canadian Pacific Railway machine shops in Winnipeg.

All markets continue steady with little or no change of any note to quote.

Barbed wire, 100 lb.	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91
Annealed wires (uncoiled) 10c. less.	
Horseshoes, iron, No. 0 to No 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 45
No. 2 and larger.....	4 20

Horsenails, No. 4—1½ in., list price	0 48
" " 5—2 " "	0 32
" " 6—2½ " "	0 28
" " 7—2¾ " "	0 24
" " 8—2¾ " "	0 22
" " 9—2¾ " "	0 20
" " 10—2¾ " "	0 20
" " 11—2¾ " "	0 20
" " 12—2¾ " "	0 20
" " 14—3¾ " "	0 20

Discount on these prices 40, 10, 7½ per cent., plus 15c. per box.

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in.. 4 10	1½ in.....4 10
3d 1½ in.....3 75	1¾ ".....3 70
4d 1½ in.....3 50	1½ ".....3 50
5d 1½ in.....3 50	1¾ ".....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2½ in.....3 25	2½ ".....3 25
rod 3 in.....3 20	3 ".....3 20
2od 4 in.....3 15	3½ ".....3 15
3od 4½ in.....3 10	4 ".....3 10
4od 5 in.....3 10	4½ ".....3 10
5od 5½ in.....3 10	5 ".....3 10
6od 6 in.....3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10
Galvanized Iron, Apollo, 16 gauge....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10¾ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	
Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Extra sheets, 36 in. wide, an advance of 25 p.c. per 100 lb.	
Genuine Russian, per lb.....	11
Imitation ".....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05
Tinplate, 1C charcoal, 20 x 28, box....	9 50
" IX.....	11 50
" IXX.....	13 50
Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50
Pig lead, 100 lb.....	5 00
Black iron pipe, ¾ inch.....	
" ¾ ".....	
" ¾ ".....	2 80
" ¾ ".....	3 25
Black iron pipe, ¾ inch.....	4 20
" 1 ".....	5 85
" 1½ ".....	8 20
" 1½ ".....	10 00
" 2 ".....	14 00
Rope, sisal, 7-16 and larger, basis.....	
Manila, 7-16 and larger, basis.....	15 25
Lath yarn.....	11 25
Solder.....	20
Axes, chopping.....\$ 6 75 to 12 00	
" double bits.....	12 00 to 18 00
Bluestone.....	5 25
Screws, flat head, iron, bright.....85 and 10 p.c.	
Round ".....	80 p.c.
Flat " brass.....75 and 10 p.c.	
Round ".....70 and 10 p.c.	
Coach.....70 p.c.	
Bolts, carriage, ¾ or smaller.....60 and 5 p.c.	
" 7-16 and up.....	55 p.c.

Bolts, machine, $\frac{3}{4}$ and under.....	55 and 5 p.c.
" 7-16 and over.....	55 p.c.
Bolts, tire	60 and 5 p.c.
Bolt ends	55 and 5 p.c.
Sleigh shoe bolts	70 p.c.
Machine screws	70 p.c.
Plough bolts	55 and 5 p.c.
Square nuts, case lots.....	3c. discount.
" " small lots.....	2 $\frac{1}{2}$ c.
Hex " case lots.....	3c.
" " smaller lots.....	2 $\frac{1}{2}$ c.
Rivets, iron.....	50 and 10 p.c.
Copper, No. 8.....	32
" No. 12	36
Coil chain, 3-16 inch.....	9 $\frac{1}{2}$
" $\frac{1}{4}$ inch	7 $\frac{1}{2}$
" 5-16 inch	5 $\frac{1}{2}$
" $\frac{3}{8}$ inch	5 $\frac{1}{2}$
" 7-16 inch	4 $\frac{1}{2}$
" $\frac{1}{2}$ inch	4 $\frac{1}{2}$
" $\frac{3}{4}$ and $\frac{1}{2}$ inch.....	4
Spades and shovels.....	40 and 5 p.c.
Harvest tools	60 p.c.
Axe handles, turned, s. g. hickory, doz..	\$3 15
No. 1	1 90
No. 2	1 60
Octagon extra	2 30
No. 1	1 60
Files common.....	70 and 10 p.c.
Diamond	60 p.c.
Building paper:	
Anchor, plain	65c.
" tarred.....	70c.
Pure fibre, plain	67 $\frac{1}{2}$ c.
" " tarred.....	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00
Shot, Ordinary, per 100 lb.....	6 00
Chilled	6 55
Powder, F.F., keg.....	4 70
F.F.G.	5 00
Tinware, pressed, retinned.....	70 and 10 p.c.
" plain.....	75 and 2 $\frac{1}{2}$ p.c.
" pieced.....	
Japanned ware.....	37 $\frac{1}{2}$ p.c.
Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	I 55

PETROLEUM.

Water white American	27 $\frac{1}{2}$ c
Prime white American.....	25 $\frac{1}{2}$ c
Water white Canadian.....	25 $\frac{1}{2}$ c
Prime white Canadian.....	24 $\frac{1}{2}$ c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap.....	5
Copper (heavy).....	8 $\frac{1}{2}$ c. per lb.
Yellow brass (heavy).....	7 $\frac{1}{2}$ c.
Light brass	5c. to 6c.
Lead pipe, or tea lead.....	2c. to 2 $\frac{1}{2}$ c.
Zinc scrap	1c.

PAINTS, OILS AND GLASS.

White lead.....	\$5 00 to \$5 50
Putty in bladder, 2 $\frac{1}{2}$ lb. in keg of 100 lbs.	0 02 $\frac{1}{2}$
Turpentine, pure, in barrels.....	\$ 0 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
Boiled	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.	
Lubricating oils, heavy castor machine.....	0 29
" " extra engine.....	0 27
" " dynamo	0 35
" " black	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	
Harness oil.....	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00 $\frac{1}{2}$
" " 2nd pressure.....	1 09 $\frac{1}{2}$

LONDON METAL MARKET.

From The Metal Market Report, Sept. 21, 1904.

Pig iron—Scotch warrants, Glasgow, closed at £50 3s, unchanged; Middleboro, No. 3, foundry at £43 1s. 6d., a reduction of 1s. 6d. in the week.

Tin—Spot tin opened weak at £126 17s 6d, futures £127 7s 6d, and after sales of 180 tons of spot and 320 tons of futures closed weak at £126 15s for spot and £127 5s for futures, making price as compared with a week ago an advance of 12s 6d on spot and 10s on futures.

Copper—Spot copper opened easy at £58 futures £58, and after sales of 50 tons of spot and 400 tons of futures, closed quiet at £58 2s 6d for spot and £58 2s 6d for futures, making price as compared with last week 16s 6d lower on spot and 15s on futures.

Lead—The market closed at £11 17s 6d, making price 1s 3d higher than last week.

Spelter—The market closed at £24, which is 10s lower than a week ago.

IS THE STEEL TRUST COMING.

The daily papers have this week been full of rumors that the United States Steel Co., having been shut out of the Canadian market by the new duty of \$7 a ton on rails, is seriously considering the question of establishing in Canada a large plant for the manufacture of steel rails and steel generally. It has had men at work in Toronto and Montreal collecting data regarding output, consumption, etc., and when this report is ready the question will be settled. The new duty of \$7 a ton on steel rails completely shuts out the American rail manufacturers, and as the Canadian market is becoming a very important one, the only way out of the difficulty is to build a manufacturing plant in this country. The erection of a plant such as the big trust would like to put up would cost from \$12,000,000 to \$13,000,000 hard cash and no securities.

When asked if there was any truth in the story, one of the officers of the United States Steel Corporation in New York admitted that the matter was being looked into, "but," he said, "it costs so much to erect a big plant with blast furnaces and the other essentials to a steel plant, that it is not likely anything decisive will be done for some months."

PERSONAL MENTION.

Mr. Joseph Heard, hardware merchant, Fenelon Falls, Ont., left Thursday last for England to visit his old home, after an absence of many years. He is taking the trip on the advice of his physician, having been in poor health for some time.

Mr. E. Hill Aldam, representing James Booth & Co., Ltd., manufacturers of brass and copper tubes and rolled metal for all purposes, brass cased bedstead tubes, etc., Birmingham, Eng., is at present in Canada on a business trip for his firm. Mr. Aldam is much impressed with the prospects for business in his line here.

Mr. A. B. Lutz, for some time foreman of Glover's tinshop, has purchased a stove and tinware business at Thamesford, and leaves to take possession on Monday next. Mr. and Mrs. Lutz are most worthy citizens, and it is with deep regret Aylmer loses them.—Aylmer Sun.

Mr. J. C. Kayser, hardware merchant, Hagersville, Ont., was married on Wednesday, September 14, 1904, to Miss M. C. Rutherford, daughter of David Rutherford, of Hagersville, by Rev. D. D. Burch, of Villa Nova, assisted by student pastor W. C. Pearce. Hardware and Metal extends best wishes.

Mr. Samuel H. Hagerman, of Huestis & Hagerman, St. John, N.B., was on Thursday evening, September 15, 1904, married to Miss Mattie Brewer, daughter of John E. Brewer, of Keswick, by Sub-Dean Swift, in the cathedral at St. John.

Madoc, Ont., is issuing debentures to raise \$9,000 for an electric light plant.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size. Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street

THIS
IS THE
Downward
Light
Lamp.

What is Useful
Light? The light
which is thrown
on the table, desk,
counter, machine,
book, or object,
where it is re-
quired.

We can easily
prove to you that
the DOWNWARD
TIPLESS LAMP is the most economical lamp
manufactured to-day. Write for particulars and
prices. For sale by all prominent dealers.

MANUFACTURED BY

ONTARIO LANTERN & LAMP CO., Limited
HAMILTON, ONT.

WALTER GROSE, Sole Selling Agent, Montreal

We also make the SHELBY and BRILLIANT
Edison Type Lamps.



CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
" " 6 months.....	10 00
25 " " 1 year.....	10 00

SITUATIONS VACANT.

WANTED—Man well posted on paints, brushes and ammunition for Western Canada, to take charge of these lines for jobbing firm. Good opening for a hustler. Apply Box 174, **HARDWARE AND METAL**, Toronto. (42)

MECHANICS WANTED.

ADOZEN first-class ship carpenters wanted; wages thirty cents per hour. Apply Frank Simpson, contractor. f

BLACKSMITH—General; time partly served; good driver; steady job; state wages. James Laing, St. Mary's. f

GOOD house painter wanted; must be temperate; good job. Apply quickly to W. A. Harris, Ailsa Craig. f

MILLWRIGHT—App'y, stating age, experience, wages wanted, and whether married or single. The Ontario Portland Cement Company, Limited, Brantford. f

WANTED—First-class die sinker. Apply, personally, International Harvester Co. of Canada, Limited, Hamilton. f

STOVE plate moulders wanted—a few first-class men. The William Buck Stove Co., Limited, Brantford. f

WANTED—First-class plumber; also fitter; steady work year around to good, steady men. A Rodgers & Co., Hamilton. f

YOUNG MAN wants to learn hard ware; references as to character and ability. Apply Box 173, **HARDWARE AND METAL**, Toronto. (39)

BUSINESS CHANCES.

A VERY desirable and successful business; stock about \$7,000, principally hardware; situated in the busiest centre of the town; largely cash trade and in splendid running order; the premises can be bought or rented; established since 1837; proprietor retiring only reason for selling. For further particulars address F. J. Wilson & Co., Buckingham, Que. (41)

FOR SALE—Planing Mill; doing large business in good centre; an exceptional opportunity. Apply to C. J. Mickle, Chesley, Ont. f

FOR SALE—Blacksmith shop; A1 stand; no opposition, good farming community. Apply R. H. Barber, Haysville, Ont. f

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

COMPANIES INCORPORATED.

THE Norman Box Co., Limited, Rat Portage, Ont., capital \$25,000; purpose, to manufacture boxes, woodwork; directors L. R. Mackay, contractor; Hugh Armstrong, Wm. McKinnon, John Glenn, and Arthur Johns.

* * *

The Mohawk Natural Gas Co., Limited, Brantford; capital \$150,000; purpose, to acquire the business of W. J. Aikens in Brantford and to supply oil, gas, electricity, steam, etc., for either light or heat, directors, Henry Cockshutt, E. L. Cockshutt, Wm. J. Aikens and Frank Cockshutt, of Brantford, and D. A. Coste, of Port Colborne.

* * *

The Steel Trough and Machine Co., Limited, Tweed, Ont., capital, \$25,000; purpose, to manufacture steel troughs for feeding and watering stock, to manufacture steel tanks and to carry on a general foundry and machine business; directors, Wilberforce Gordon, Tweed; D. C. Johnston, S. H. Ketcheson, W. H. Gordon and J. F. McGowan.

* * *

Plans are out by the Berlin and Waterloo Street Railway Co. for a new and independent power plant to be built at the corner of King and Albert streets. The buildings throughout are to be of brick. The main building is to be 80x32 feet with a boiler house 40 x32 feet. The plant will have a capacity of 260 horse-power. The larger building will provide room as a car barn and repair shop also.

NOTES.

A horseshoe firm propose to build a factory to cost about \$30,000 in Hamilton. The deal is not yet closed, however.

The Paris, Ont., Plow Co. are advertising for tenders for the erection of a three-storey warehouse on the premises. The building is to be metal-clad.

Prof. P. G. T. Kendall, of Tulane University, New Orleans, reports that he found a rich ledge of copper in Northern Manitoba. He says he will develop it next year.

The Peterborough, Ont., Town Council have received a proposition from a firm who offer to start a rubber factory to employ 200 hands if a bonus of \$15,000 is granted.

The Eureka Refrigerator Co., Limited, Toronto; capital, \$40,000; purpose to make and sell refrigerators, etc.; directors Wilbert Hooey, Wm. H. Shapley and H. W. Shapley, all of Toronto.

The Rondeau Tug Co., Limited, Blenheim, Ont.; capital, \$20,000; purpose to carry on business of fishermen and tug owners; directors, J. W. Post, W. E. Hall, and R. M. Thompson, Blenheim.

The Doty Engine Works Co., Limited, Goderich, Ont.; capital, \$40,000; purpose, to manufacture engines, boilers and machinery and to build vessels; directors F. W., C. W. and M. E. Doty, of New York.

The Dominion Coal Co. sent a cargo of coal from Sydney, N.S., to Vera Cruz, Mexico, for use on the Inter-Oceanic Railway of Mexico. It is believed that an extensive trade may be the outcome.

The Quebec Railway, Light and Power Co., Quebec, held their annual meeting last week. The financial statement showed an increase in net earnings of \$17,426.47. A Thomson was re-elected president and E. A. Evans general manager and chief engineer.

The Victoria Acetylene Mfg. Co., of Canada, St. John; capital, \$25,000; purpose, to manufacture and sell acetylene gas apparatus; directors James H. Whitman, Port Dufferin, N.S.; James Hunter and J. H. McRobbie, St. John; Joseph Healon and J. W. Smith, Hampton; R. G. Edgecombe, St. John.

MARL DEPOSITS NEAR WINNIPEG.

A deposit of marl, covering about 750 acres and from 7 to 25 feet deep, has been discovered in close proximity to Winnipeg. It is of the quality for the production of the best Portland cement. T. O'Doherty, 409 Main street, Winnipeg, in a recent visit to New York succeeded in interesting bankers in New York in a proposal to establish cement works at the deposit.

These bankers, he reports, have undertaken to sell \$500,000 worth of 5 per

cent. thirty-year bonds to net 80 per cent., which should enable the owners to build a mill with a daily capacity of one thousand barrels, and leave a substantial balance in the treasury. The cement is to be equal in quality to the best brands now on the market, and could be sold for less than two dollars per barrel.

Professor Kendrick made an analysis of the marl, and his report shows the presence of the necessary ingredients for cement of the highest grade. The discoverers of this marl deposit believe that the development of the deposits will be a great boon to the province in vastly reducing the cost of building. The deposit is only two miles from the C.P.R. track.

PORTLAND CEMENT IN CANADA.

Thomas W. Gibson, Director of the Ontario Bureau of Mines, deals with the mineral resources of the province in his report for 1904, just published.

The Abitibi region, which will be opened up by the new Grand Trunk Pacific, is presented in a series of illustrations, with articles by Professor J. M. Bell and Dr. W. A. Parks, the first a lecturer in geology, and the second an authority on both mineralogy and geology. These gentlemen were at the head of an expedition past the "Height of Land" and in hitherto unknown regions.

The summary of mineral production shows that Ontario produced \$12,870,593 in mineral value in 1903, and that 10,658 employes were engaged at a wage expenditure of \$4,222,386.

Gold and silver are not the most important minerals of Ontario, for nearly all are giving way in comparative value to the production of Portland cement, the new building material.

It is only within the past decade that the manufacture of cement in Canada has assumed the big place which it now occupies. When one studies the new use which it is being put to every year, and the illimitable possibilities of its future, the \$1,182,799 worth of Portland cement made in Ontario in 1903, which now bulks so large, will seem small indeed.

Director Gibson might with some profit have included a few pictures of these mills in his report. While a cement factory may not sound so attractive as a gold or silver mine, they nevertheless turn rock and clay into good bank notes and are invariably a safer investment for capital.

Quebec Province will vie with Ontario when the new mill just established across the river from Ottawa commences operations.

In his report and statistical review of the cement industry, Director Gibson says: In the report of the Bureau of Mines for last year (4), some account was given of the origin and development of the Portland cement industry, and of the rapid increase both in consumption and production since the business was established in the province in 1891. The expansion in the manufacture of Ontario cement has been remarkable, each year, with a single exception (1894), showing a decided increase over the previous one. The rate of growth during the last five years, taking the number of barrels as a basis, has been as follows: 1899 over 1898, 45 per cent., 1900 over 1899, 38 per cent., 1901 over 1900, 14 per cent., 1902 over 1901, 49 per cent., 1903 over 1902, 33 per cent.

For construction purposes cement is constantly encroaching upon the domain of stone, lime, wood, and even iron and steel, and there is every indication that its use will continue to multiply and extend. Well made and well manipulated cement will withstand exposure to the weather for hundreds, even thousands of years, as the excellently preserved remains of ancient Roman buildings attest, and each recurring conflagration in modern cities shows that while limestone, granite and sandstone will disintegrate and crumble under the influence of intense heat, and steel frames warp and destroy the structures which they support, such inert and homogeneous materials as brick and cement will pass through the ordeal comparatively uninjured. The development of the country, especially by means of the great transcontinental and other railways in progress or projected, as well as the improvements constantly going on in roads and pavements, together with the growing employment of cement for building and other purposes, will undoubtedly sustain and increase the demand.

The demand for cement at Ontario factories was good early in 1903 and prices were higher than in 1902, but at the close of the season the demand was fully met at prices about 20 per cent. less than those of a year before. The cause of the reduction was the large importations, chiefly from the United States, where manufacturers have the advantage of cheaper plants and cheaper coal, the latter being a leading element of cost. The total production of Ontario, practically the only province in the Dominion where cement is made, was last year 695,260 barrels, valued at \$1,182,799; while the imports into Canada for the fiscal year ending 30th June, 1903, were 2,572,088 cwt., or the equivalent of 734,882 barrels of 350 lbs. each, valued at \$1,172,067, including

duty. These imports were from the following countries:

	Cwt.	Value.	Duty.
Great Britain.....	701,775	\$185,751	\$ 45,993.02
Belgium.....	840,761	262,918	101,781.50
Germany.....	362,844	129,633	39,731.04
Holland.....	3,750	1,085	468.75
Japan.....	53,788	17,485	6,723.50
United States.....	609,170	305,491	76,306.22
Total.....	2,572,088	\$901,063	\$271,004.03

For seven months ending 31st January, 1904, the imports of cement have amounted to 1,675,742 cwt., or 478,783 barrels, of which 555,896 cwt. came from the United States, 444,420 cwt. from Belgium, 321,519 cwt. from Great Britain, and 353,907 cwt. from other countries.

Mention is made of the nine factories now making cement in Ontario, and the four other plants in process of construction, but Mr. Gibson does not mention the plant across the river from Ottawa, for, while it is owned and controlled by Ontario capitalists, it is just within the borders of the Province of Quebec. This plant of the International Portland Cement Company has facilities possessed by no other cement factory in America, and will be the largest producer in Canada.

Mr. Gibson presents in tabular form the growth of the cement industry since 1891, the year in which the production really began in Canada.

The Dominion Government at the session just closed, disposed of any fear or possibility of "dumping" by its legislation against such demoralizing tactics.

And while the imports are greater than the total product of Canada, we should not be content until every barrel of foreign-made cement is driven off the market.

Canada should export Portland cement rather than import it, for we have here in Ottawa all the raw materials needed, unlimited rock, the clay, and cheap electric power. No other point has these exceptional advantages.

The factory just about completed will allow of the manufacture of the highest grade of Portland cement at a less cost than in any other plant in Canada.

Canada is just commencing to grow, and it may be safely asserted that within five years the demand for Portland cement will be just double what it now is. On the construction of the Grand Trunk Pacific Railway thousands of tons of cement will be used, for the engineers know the value, economy and solidity of cement construction.

At the annual meeting of the Superior Portland Cement Co., held in Toronto last week, the financial report showed the company to have its plant fully equipped, and to have a fair balance in the bank.

PAINT, OIL AND BRUSH TRADES

AN APPRECIATION OF KILLARNEY.

By Wm. H. Evans.

"By Killarney's Lakes and Fells."

AT the Great Southern and Western Railway Hotel, Killarney, you will find comfort and rest.

The sweetness and serenity of the surroundings of Killarney stamp themselves indelibly upon the mind, a land delightful to roam in. The picturesque peasantry, the comely colleens, the meek donkeys with their panniers or little loads of peat (the coal of the country) — "Sweet Peggy" perhaps "on a Low Back'd Car," the smart Royal Irish Constabulary and rollicking Pat ready to drive "yez" with his "jaunting car" anywhere and everywhere and "lave the fare to yer honor shure."

Here we have beauty, variety, hill and valley, meadow, pasture and woodland. The lordly mansions of the landed proprietors and the simple thatched cabin of the natives, the latter probably tenanted by a good-sized rosy-cheeked family and the ever-present pig, patient donkey, fowls and terrier dog.

Walk down to Ross Castle on the shores of the lake, take a boat and let the imagination run riot. Legends and fairy tales will fill the brain and the eye will drink in ancient ruin, lake, wild uncultivated space, mountains and rivulets.

The red deer come down to drink, the fat sheep revel in the rich pasture and wild fowl flit across the little bays while the little Kerry cows will be seen chewing the cud of contentment. The hills are not marred by forest fires or the views by patent medicine advertisements. A stranger to Irish history would exclaim "Here peace and happiness prevail," and yet one remembers Erin and the causes which have reduced her population more than half. Muckross Abbey is a fine old ruin with an immense yew tree over 500 years old, still flourishing, springing from the centre of the garden around which are the well-preserved cloisters where the monks of old held sweet communion together.

Your pilot will point out the Colleen Bawn Rock, Ross Castle an old and grey stronghold of the O'Donaghues together with numerous interesting fea-

tures. Through the gap of Dunloe, five miles upon pony back, the scenery is entrancing and you will stop at Kate Kearney's cottage for lunch—

"Sweet Kitty Kearney
Who lives by the Lakes of Killarney."

Going through the gap your pony will be led by an Irish lad whose dreamy black eyes will show a Spanish strain often found in the Southwest of Ireland, and the bare-legged colleens with winsome features will run alongside and offer you milk or "potheen" according as the gauge your inclinations. If



Wm. H. Evans.

you decline either "shurely the swate craythur will pay his footin' and God bless him." When you hand out some coppers you are blest. "Cushla Machree, may Heaven bless you and may every hair on your head be a candle to light yez to glory." I suppose to a bald-headed man they would say "may your path be as smooth as your pate."

Let us digress for a minute to note some of Pat's witticisms.

At a wayside tavern I called a waiter and said "Will you serve us with some refreshments?" "Faix an' I will, both

in this wurruld and in the next if yez will let me."

Another compliment was more negative. "Thank you for that same, may the divil fly away wid yer inimies!"

We spent an hour upon Denas Island where so mild is the climate that plants such as the eucalyptus tree and the bamboo flourish; ferns, bracken, the trailing arbutus, the climbing clematis grow in rich profusion and the lover of flowers and plants may indulge his fancy without limit. Close by is the charming old Weir Bridge and the classical "Meeting of the Waters."

"Oh, there is not in this wide world
A Valley so sweet."

Upon Innisfallen Island, small in extent but rich in verdure and ruins, dear to the antiquarian is St. Finian's grave and the remains of an ancient monastery where the strains of

"Holy Chant and Psalm"

in the olden times must have floated from the chapel, now hoary with age, with delicious sweetness across the beautiful gem-like lakes whose beauty no pen of mortal man can describe.

Our boatman, Corny (Cornelius) Gleason regaled us with weird, occasionally pathetic, stories of Ireland's early greatness and then with merry yarns which you must take with gusto as it would be sacrilege to dispute them in these hallowed waters.

Test for Wood Spirits.

A simple test by which the presence of wood spirits as an adulterant can be easily detected is as follows: Take equal proportions of chemically pure muriatic acid and spirits turpentine to be tested and place them in a glass tube. Shake the tube so that the acid and turpentine will be thoroughly mixed. If there is as little as 5 per cent. wood spirit in the turpentine it will show a yellowish color, deepening to a brown according to the percentage of the wood spirits adulteration. With 50 per cent. adulteration the muriatic acid turned the turpentine black.—Oil Review.

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.



Fall House-Cleaning

is in order.

GILLETT'S LYE

will do a surprising amount of work if given a chance.

Hardware dealers should make Gillett's Lye a prominent article on their counters and in their sales talk. There's money in it.

E. W. GILLETT COMPANY LIMITED
TORONTO

Do YOU sell Silverware?

If you do, you probably have already learned of the
exceeding merits of **Standard Silverware**
—the silverware that carries this mark

If you do not, then we have two things to say
to you :

1. That it pays handsomely to carry a choice line of silverware—not necessarily a heavy stock, but whether it be large or small, your stock should be “choice”—both as to grade, pieces and patterns.
2. That the “Choicest” silverware, for high grade quality, and for beauty and serviceableness is that branded “Standard.”

We make it and we guarantee it.

Send to-day—a post card will do—for our handsome catalogue of Standard Silverware—the “Silverware that sells.”



Standard Silver Co., Limited
Hayter Street, Toronto



Paint and Oil Markets



Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Sept. 22, 1904.

PAIN'T and oil business is said to be rather better this week than last, and the orders now coming in may be looked upon as the advance guard of Fall trade. A fairly good turnover is looked for from now until the close of navigation. Prices are steady and the only article that has experienced any fluctuation is turpentine, but it has been of that up and down character which prevents local dealers from altering their own prices. No line can be distinguished above the other as being particularly good as trade in all lines is of a favorable amount. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1, 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Turpentine—Single barrels, 83 1-3c per gallon; two to four barrels, 82 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs. The above prices are net 30 days; for longer terms prices are higher. The market is firm.

Linseed Oil—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure White, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street E.
Toronto, Sept. 23, 1904.

BUSINESS has been fairly active this Fall, especially in staple lines.

Linseed oil continues firm in Great Britain and turpentine is steady in the south. Locally there is no change.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb.,

\$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls.,

HOLLYWOOD—and others.

Unlike the others,

Hollywood Paste, Ready-Mixed and Floor Paint

wear on the job, not off it.

Secure agency for 1905.

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED.



Turn Your Eyes Our Way

when you have an order for Paints, Oils, Varnishes and kindred lines.

LOCOMOTIVE BLACK ENAMEL

specially manufactured for refinishing Locomotives, Locomotive Tenders, Smoke Stacks, Hand Rails—in fact, anything in iron and metal surfaces requiring a nice, smooth, gloss finish. Good also for woodwork. One, five, ten gallon cans. Send for net prices.

Standard Paint & Varnish Co., Limited, Windsor, Ont.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.



WE WANT YOU
TO TRY
SOLARINE
SHALL WE SEND YOU
SAMPLE ORDER?
—MONEY BACK—
"SOLARINE" POLISHES
60 George St., Toronto, Ont.

Used by the Government

A proof that it is good—nay,
better than others.

York Metal Polish

(Liquid or Paste)

is without a peer.
Order it from your jobber.
Sample tin free on request.

Anglo-Canadian Supply Co.
91 Wood St., TORONTO.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

Get your GLUES from

The GROVE CHEMICAL CO., Limited

Appley Bridge, Lanc, England.

Our ordinary grades are better than ordinary, and we can supply special makes for special purposes. SCOTCH GLUES, BOX GLUES, COLOGNE GLUES for Paper Makers. Size of all kinds. Send your name for our printed matter.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO MONTREAL LONDON
OTTAWA WINNIPEG.



Once Used Always Used.

This is not theory; it is a fact about "ISLAND CITY" Paints. If you can make a first sale, the second and third will follow as a matter of course. You need these paints in your business.

P. D. DODS & CO., Montreal, Toronto, Vancouver

**Poor Paint
Bad Brush
and a
Leaky Tin**

May drive any man or woman
to despair!

**Good Paint
and
Good Packages**

are our specialty. In

**COLORS
VARNISHES
AND
JAPANS**

we supply the best of its kind.

ADDRESS,—

**THE
CANADA
PAINT
COMPANY
LTD**

**Montreal
Toronto**

8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

Window Glass.

MONTREAL.

There is every probability of a shortage in the glass stocks for the coming Winter. Orders have already been refused by Belgian makers, and the prices they are now quoting are extremely high. Although some cutting was being done recently in the glass market the prices quoted at present are being firmly maintained, on the \$3 basis for Star, and 40 per cent. off for double. There is every likelihood that prices will advance in the near future. Our quotations are: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount for diamond glass is 25 per cent. and for double thick, 40 per cent. Diamond star or double thick, first break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.90; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

A steady demand is reported from all parts of the country. Prices unchanged. We quote: Star first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount 15 to 20 per cent. These prices are shaded on large and well assorted specifications.

St. John, N. B.

There is still no change in the price of burning oil. The booking of Fall business is about completed. In lubricating oils, values are unchanged. The busy season is over. Paint oils show a steady sale at firm prices. Linseed particularly, is tending higher. In cod oil receipts are not large and prices are lower than last year. The fact that some high priced oil is carried over tends to depress the market.

Swedish Way of Coloring Woods.

The Timber Trades Journal, of London, England, says of a new Swedish method of coloring wood in the log: All the sap is expelled and the log is then treated with chemicals, and the color or colors are pressed into the wood. Any shade desired can be obtained, and, in fact several colors can be merged one into the other, producing a very beautiful effect. On cutting up the samples we received, we found that the color was evenly distributed all through the fibres, the grain of the wood giving a very pleasing effect, especially when polished. The wood, it is claimed, dries sooner than by ordinary seasoning, and it can also be rendered fire proof by adding special chemicals. Of course, painting is done away with, so that the natural structure of the wood is seen to better advantage than when painted in the ordinary way.

Fire Proof Paints.

THE object aimed at in the production of so-called fire proof paints is to retard combustion. Certain chemical salts retard or, under certain conditions, entirely prevent the ignition and combustion of canvas, wood, etc. Such salts are zinc chloride, silicate of soda and some others. Wood, etc., may therefore be treated with a solution of one or other of these salts, and, when dry, may be painted with some especially prepared paint, which also tends to retard or prevent ignition.

Considerable attention has been given to this subject in France, where some years ago the Society for the Advancement of National Industry of France offered a prize of 1,000 francs for the best fire-proof paints. Professor Abel J. Martin, of Paris, gained the award with a mixture consisting of borax, boracic acid, soluble cream of tartar, ammonium sulphate, potassium oxalate and glycerine. The ingredients were made into a paste with glue, and were mixed with ordinary paint. The use of this mixture was made obligatory in all the Paris theatres, and has stood the test of time.—Paint, Oil and Drug Review.

Business Changes

ONTARIO.

A MEETING of the creditors of M. Greenspoon, general merchant, Hawkesbury, is to take place to-day, Sept. 23.

W. T. A. Fishleigh, hardware dealer, Wingham, is dead.

A. L. Brown Harness Co., Leamington, have removed to Bowmanville.

Charles Greb, hardware dealer, Zurich, has sold out to Alex. Charlesworth.

Canadian Wringer & Specialty Co., Toronto, have assigned to E. R. C. Clarkson.

J. D. Smith, general merchant, Billings Bridge, has sold his stock at 25c on the dollar.

The stock of Charles Flanigan, harnessmaker, Paris, is advertised by assignee for sale by auction.

John Skitch, general merchant, Gravenhurst, has assigned to H. B. Bridgeland; meeting of creditors Sept. 23.

QUEBEC.

Alex. Desmarteau is curator to P. E. Ruel, painter, Montreal.

J. A. Lafrance, general merchant, Grand Mere, has assigned.

J. A. Marchant, general merchant, Fraserville, is offering to compromise.

F. J. Morin, general merchant, Montmagny, has assigned to V. E. Paradis.

H. Mercier, general merchant, St. Ephrem D'Upton, has offered sixty cents cash for claims.

Jos. Gaumond, general merchant, St. Jean Port Joli, has assigned to Lefaivre & Taschereau.

Montreal Belting Co., manufacturers Montreal, have dissolved; Ernest L. W. Saunderson registered.

The Standard Tinware Co., Montreal, have assigned; meeting of creditors is to be on the 28th inst.

Lafaivre & Taschereau have been appointed curators to Ignace Marquis, general merchant, Sayabec.

A meeting of creditors of J. H. Therrien, general merchant, St. Gregoire, is to take place on Sept. 26.

A. E. Begin, general merchant, St. Charles, (Bellechasse County,) has assigned to Lefaivre & Taschereau.

V. E. Paradis has been appointed curator to S. E. Adam, general merchant and lumber dealer, Disraeli.

M. S. Ouellet & Cie., general merchants, Beausejour, (Rimouski Co.,) have assigned to Lefaivre & Taschereau.

Lamarche & Benoit are curators; Narcisse Leclerc, general merchant, French Village, who is offering 30c on the dollar.

T. J. Turgeon and Edward Turgeon, have registered under the style of Le-

page & Turgeon, tinmiths and plumbers, Montreal.

E. G. Manhire and M. J. Quigley have registered under the style of Manhire & Quigley, plumbers, steamfitters, etc., Montreal (Westmount).

NOVA SCOTIA.

Wm. Robertson & Son, wholesale and retail hardware dealers, Halifax, suffered loss by fire.

H. H. Fuller & Co., wholesale and retail hardware dealers, Halifax, suffered loss by fire.

John White & Co., dealers in stoves, tinware, etc., Halifax, have been burned out; loss partially covered by insurance.

Black Bros. & Co., Limited, wholesale and retail hardware dealers and ship chandlers, Halifax, sustained loss by fire.

Partnership has been registered between Daniel J. McDonald and Margaret Rankin, Glace Bay, to do business under the style of McDonald & Rankin.

NEW BRUNSWICK.

John D. Creaghan, general merchant, Newcastle, has suffered by fire at Chatham; loss partly covered by insurance.

BRITISH COLUMBIA.

Geo. Patchett, hardware dealer, Armstrong, is asking extension of time.

MANITOBA AND N.W.T.

B. Burke, general merchant, Gainsboro, has sold to Nrigg & Bohmer.

Carmichael & Reid, hardware dealers, Coleman, have sold out to Chambers Grady.

Fisher & Ross, general merchants, Claresholm, have sold their Leavings branch.

Sedore Bros., harnessmakers, Killarney, have sold Rosthern branch of their business.

F. R. Oliver & Co., hardware dealers, Saskatoon, have been succeeded by Oliver & Kempthorn.

CANADA HARDWARE CO. FIRE.

Early Wednesday morning, September 21st, the warehouse of the Canada Hardware Co., on DeBresoles street, Montieal, was totally destroyed by fire. The loss on the stock is estimated at \$150,000 and the insurance amounts to \$75,000, distributed among several insurance companies. A very valuable stock of arms and ammunition was in the ruined building and the explosion of gunpowder and discharge of cartridges made the work of the firemen very difficult. The Canada Hardware Co have opened temporary offices at 43 Common street and beg the indulgence of their customers for the present.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

Want Ads.

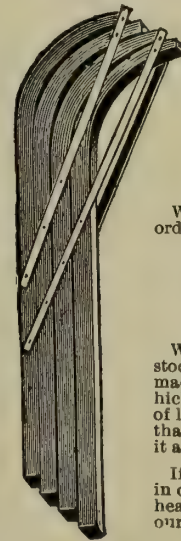
In this paper cost 2 cents per word first insertion, 1 cent per word subsequent insertions. Contractions count as one word, but five figures (such as \$1,000) may pass as one word. Cash remittance to cover cost **must in all cases** accompany orders, otherwise we cannot insert the advertisement. When replies come in our care 5 cents additional must be included for forwarding same. Many large business deals have been brought about through advertisements of 20 or 30 words. Clerks can be secured, articles sold and exchanged, at small expenditure.

MacLEAN PUBLISHING CO., Limited
Montreal and Toronto.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.



The Sarnia Hub, Spoke and Bent Goods Mfg. Co.

Sarnia, Ontario

We are prepared to fill any orders for

Heavy Waggon,
Sleigh,
Buggy, and
Cutter Stock

We make a specialty of heavy stock and can fill orders promptly made from the best of oak and hickory as we carry a large stock of lumber and can make any sizes that may be required. We make it a point to fill orders promptly.

If you are in need of anything in our line we will be pleased to hear from you and we will give it our prompt attention.

Bob Sleigh and
Long Runners

J. S. Loughead & Son
Sarnia Ontario

\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ CONTRACTS

mean dollars for the pockets of contractors. The weekly reports in the

CANADIAN CONTRACT RECORD

tell where contracts may be had.

\$2 per year buys them. Address

THE CONTRACT RECORD
Toronto and Montreal

STOVES AND TINWARE

New Galvanizing Process.

A NEW process of galvanizing known as Sherardizing, has been developed abroad to a commercial basis, which promises to overturn the present hot galvanizing process used on iron and steel. By the new method the work is covered with an even coating of zinc, without dipping it into a molten bath, and it is done at considerably less than the melting temperature of zinc, so that the deteriorating effect of high temperature is considerably reduced. The work to be galvanized is thoroughly cleaned of surface oxide or rust by sand blasting, and bath, or other preferred means, and is then placed in an air tight cast iron muffle or oven, charged with the zinc dust of commerce. After being kept at a temperature of from 500 to 600 degrees Far. for a few hours, the work is removed and allowed to cool. The process of coating with zinc has been perfectly effected by the baking method. The thickness of the coating of zinc depends upon the time the work is kept in the muffle. The galvanizing is thus done at a temperature about 200 degrees less than necessary by the hot bath process. Moreover it has the advantage of wasting none of the zinc. The waste of zinc by the common process is quite a considerable percentage of the total amount of the bath. Although commercial bar zinc melts at something over 700 degrees Far. the commercial zinc dust does not melt at even a much higher temperature, so that there is no danger of its melting in the muffle.

On the Alert for Stove Trade.

ABOUT this time of year people are beginning to think about heating stoves—that is the thoughtful ones are, and men and women who think, who do not wait until the last minute and then search the papers for “job lots” generally make the best customers. They think of the future, prepare for it and have the money to pay on delivery. It behooves the stove dealer to be thoroughly alive as these Fall days come on. If he is late his enterprising customer will lose all faith in him and seek some other dealer who is up to the

times. The manufacturers this season certainly offer a bewildering array, and the average dealer will be left in the lurch if he fails to look around for new and good things. That does not mean to desert an old and tried house for a new one, for the reliable establishments generally keep thoroughly up-to-date, but rather indicates that dealers ought in justice to those who yearly trade with them to see that they do offer the very best, and that they are fully cognizant of all improvements and innovations that have been in progress since they sold their last lot of stoves. In other words don't get left by the forward march of humanity if you want your customers to continue to have an abiding faith in you, and desire to keep your bank account fully “up to the average” or a little more so.—Stoves.

Utilization of Heat.

THE common ideas as to the amount of heat, from fuel burned, that is wasted in the chimney need some readjustment, particularly in reference to hot air furnaces, as will be seen from a study of the following article by an observing furnaceman, which briefly describes his tests and gives his conclusions.

In favoring Metal Worker with the article he writes: “I inclose you an article on furnace heating, giving the result of some pretty carefully made experiments on the subject of utilization of heat. Though the test was made with my own furnace, the information secured is certainly a contribution to the literature on the subject, which I have found rather deficient in the matter of carefully made experiments along this line. There is too much guessing and too little scientific experimenting.” The article is as follows:

Persons familiar with the principles of heat are aware that the perfect combustion of a definite quantity of fuel of a definite chemical composition will liberate a definite amount of heat. No heating apparatus can add to this amount. The heat is in the fuel and not created by the heating apparatus.

The most usual waste in heating apparatus is that of the heat contained in

the gases of combustion and the air which is carried through the fire box in excess of the amount needed for the combustion of the fuel. After the matter of securing the most perfect combustion of fuel possible, the problem of successful and economical heating resolves itself into the question of how large a percentage of the heat liberated from the fuel it is possible to utilize in heating, and how much is necessarily allowed, through the imperfection of our apparatus, to escape to the chimney with the waste products of combustion.

To determine what might be considered practically possible in this matter, I recently made a fairly careful test, using a medium sized hot air furnace with natural gas as fuel. The furnace took its air from the floor of the room in which the experiment was made, the casing being left open all around the bottom. There was no restriction on the volume of air which could enter the casing. On the top of the furnace I had two 12-inch, one 10-inch, one 9-inch and one 8-inch pipe; they were from 30 to 40 inches long, and, as the furnace was low, it was practicable, by standing on a chair, to reach the tops of all these pipes without trouble.

The temperature of the air at the floor at the commencement of the experiment was 71 degrees. There was some difference in the velocity of the air in the various pipes, owing to difference in height and diameter, and some difference in temperature, owing to the faulty location of the pipes on top of the furnace. The top of the longest pipe was less than 5 feet above the centre of the heater, and the good velocities shown were doubtless the result of the free inlet of air at the bottom of casing.

In reducing the result on each pipe to British thermal units (B. T. U.) I have used the common basis of one unit for each 50 feet of air heated 1 degree F. The velocities were secured with an anemometer. The opening in the smoke pipe for insertion of the instrument was about 5 feet above the outlet from the furnace, and care was taken to close the opening as completely as possible while the velocity was being secured. From

CUSTOMS BROKERS.
FORWARDING and DISTRIBUTING AGENTS,
FREE AND BONDED STORAGE
TURNBULL & HENDERSON, Vancouver, B.C.

**NEWMAN'S PATENT
 INVINCIBLE FLOOR SPRINGS**

Combine all the qualities desirable in a Door Closer. They work silently and effectively, and never get out of order. In use in many of the public buildings throughout Great Britain and the Colonies.

MADE SOLELY BY
W. NEWMAN & SONS, Birmingham.

**WORK AND
 PRICES
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GALVANIZING **ONT.**
ENGINE & PUMP CO., **WIND**
TORONTO, ONT. **LIMITED.**

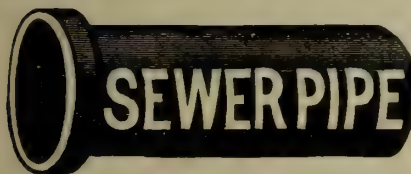


When placing your order for Lanterns, ask for **WRIGHT'S Cold Blast Lantern**, which is the only genuine Cold Blast Lantern made. They are the best, and we will guarantee prices against all other makers for this season and for next.

E. T. Wright & Co., Manufacturers, Hamilton and Montreal.

FULL STOCK

Salt Glazed Vitrified



**Double Strength Culvert Pipe
 a Specialty.**

THE CANADIAN SEWER PIPE CO.

**HAMILTON, ONT. TORONTO, ONT.
 ST. JOHNS, QUE.**

DIAMOND EXTENSION FRONT GRATE.

Ends Slide in Dovetails similar to Diamond Stove Back.

**Diamond
 Adjustable Cook
 Stove Damper**

Patented March 14th, 1893.



Manufactured by **THE ADAMS COMPANY, Dubuque, Iowa, U.S.A.**
TAYLOR-FORBES CO., Limited, Guelph, Ontario



Patented December 22nd, 1896.

EXTENDED.
 4 x 11 to 6 x 21.

For Sale by Jobbers of Hardware.

*RETURNED
 OCT -5 1904
 Cut Body 20
 Page 76*

**NEW IDEA
 HOT BLAST
 HEATERS—**

The kind that gets all the heat out of the fuel.

"New Idea" Hot Blast Heaters make a very desirable line for the energetic dealer, because they very quickly earn an enviable reputation in every community where they are sold.

"New Idea" Hot Blast Heaters are great heat producers, which is made possible by their scientific construction. They are durable, because every part is heavy and well fitted. They are easily regulated, because the draught system is simple and always effective.

"New Idea" Hot Blast Heaters are made in three sizes, with fire-pots 14, 16 and 18 inches in diameter.

Offer your customer the best, and in the heater line that is the "NEW IDEA" HOT BLAST.



Guelph Foundry Co., Limited, Guelph, Ont.

Western Representatives:

MESSRS. E. G. LOW & CO., MARKET ST., WINNIPEG, MAN.

the figures thus secure I have made up the table printed below.

There are two elements of error in the given calculation of percentage. 1. No estimate was made of the amount of heat escaping through the casing. This, if computed, would increase the total amount of heat produced by the fire and would decrease the percentage of heat in the waste to the chimney, although not, of course, the total amount of such waste. 2. The air and gas in the smoke pipe was saturated with water vapor and therefore had a greater capacity for heat than the dry air in the hot air pipes. As the temperature in the smoke pipe was only 119 degrees, and the amount per minute only 33 cubic feet, this would be inconsiderable, but whatever it amounted to would make an increase in both the amount and percentage of heat wasted through the smoke pipe.

The estimate of the total number of B.T.U. produced by the fire is probably

excellence is known. They have been on the market for eight years and are now pretty well established. The guarantee of the makers that money will be refunded inspires the confidence of the trade.

Boiler Heating Furnace.

A NEW type of furnace was recently patented, the object of which "is to provide means for generating a high degree of heat, and to economically and efficiently effect complete combustion of fuel and consumption of smoke." Says the Electrical Review:

The furnace consists in principle of two water-jacketed cylinders, one within the other, which are connected to the boiler so that the water can circulate freely from the furnace to the boiler. The inner cylinder, whose diameter is considerably less than that of the outer one, has a 60-degree opening in the bottom of it, through which the free air, combustible gases and smoke pass. It is in this inner cylinder that the prin-

	Diameter of pipe. Inches.	Area of pipe Square inches.	Velocity of air, Feet per minute.	Volume. Cubic feet per minute.	Temper- ature of air in pipe.	Increase over initial temper- ature.	Number B.T.U. per minute.
Hot air pipe....	12	113	308	242	219	148	716
Hot air pipe....	12	113	299	233	202	131	610
Hot air pipe....	10	78	278	150	206	135	405
Hot air pipe....	9	63	289	126	197	126	317
Hot air pipe....	8	50	289	100	192	121	242
Total hot air ...				850			2,290
Smoke pipe....	7	38	146	33	119	48	32
SUMMARY.							
Total number of B. T. U. in hot air per minute.....	2,290						
Total number of B. T. U. in waste to chimney per minute.....	32						
Total number of B. T. U. produced by the fire per minute....	2,322						
Percentage of heat produced contained in hot air.....	98 6						
Percentage of heat produced contained in waste to chimney.....	1 4						

too high. The hot air from the pipes escaped into the room, and, though the windows were all open, this undoubtedly caused an increase in the temperature of the air at the intake. As this would affect equally the air entering the fire box and that entering the casing, any error here would not make any change in the percentage of heat in the air and the waste.

As a result of these experiments it would seem that there is no scientific necessity for the usually estimated waste of from 40 to 75 per cent. of all the heat produced by the fire through the smoke pipe.

"Comet" Brand Sheets.

Alex. Gibb, Montreal, the agent for this brand of galvanized sheets, is finding that they meet with a ready acceptance among the trade when once their

principal combustion takes place, to form flame of intense heat, which, due to the effect of natural draught, is projected under and against the bottom of the boiler, as though the furnace were a "Bunsen" burner of large dimension.

There are no grates in the furnace, the fire being in between the two water-jacketed cylinders. There is an opening in either side of the outer cylinder to feed the fire, and one in the lower end of it, through which to take out the ashes.

BOARD OF TRADE REORGANIZED.

The Prescott, Ont., Board of Trade was reorganized on September 12 with a membership of over 80. The following officers were elected: President, F. S. Evanson, boot and shoe merchant; 1st Vice-President, W. P. McCarthy, grocer; 2nd Vice-President, W. F. McPherson, hardware merchant; Treas-

urer, F. B. Bennett, banker; Secretary, J. D. Mills, hardware merchant.

BUILDING PERMITS.

MONTREAL.

V. Forest, house on Dubord street, \$6,000.

East End Methodist Church, Demontigny street, \$14,000.

Hugh Graham & Co., stable on St. George street, \$5,200.

Arcade Lusignan, dwelling house on Plessis street, \$2,500.

J. S. Prince, dwelling houses on Cadieux street, \$4,000.

Jas. Fitzpatrick, dwelling house on Cuvillier street, \$2,000.

L. A. Lavellee, dwelling houses on La Salle avenue, \$4,500.

Jas. McMenamin, dwelling houses on St. Charles street, \$4,000.

Mrs. Wm. Paquette, dwelling house on Aylwin street, \$3,000.

McGill Union, basement, Sherbrooke and Victoria streets, \$9,000.

H. Papineau, dwelling house on Mount Royal avenue, \$3,000.

A. Lapierre, dwelling house on Christophe Colombe street, \$1,800.

D. Laverdure, dwelling house and stable at 69 Duluth avenue, \$1,650.

O. Groleau, dwelling house at Notre Dame and Davidson streets, \$4,200.

P. Wilson, block at Notre Dame and Frontenac streets, comprising dwelling houses and stores, \$10,000.

TORONTO.

Wm. Scott, dwelling, 70 Cowan avenue, \$2,500.

D. J. Proctor, dwelling, 409 Margueretta street, \$1,800.

Frank McMahon, dwellings, 39 and 41 Gloucester street, \$5,000.

Aliston St. Croix, dwellings, corner of Shaw and Bloor streets, \$5,000.

John Polesky, dwelling, near Queen street, on Brooklyn avenue, \$1,600.

Purity Mfg. Co., alterations to dwelling, corner of Florence street and Brock avenue, \$2,000.

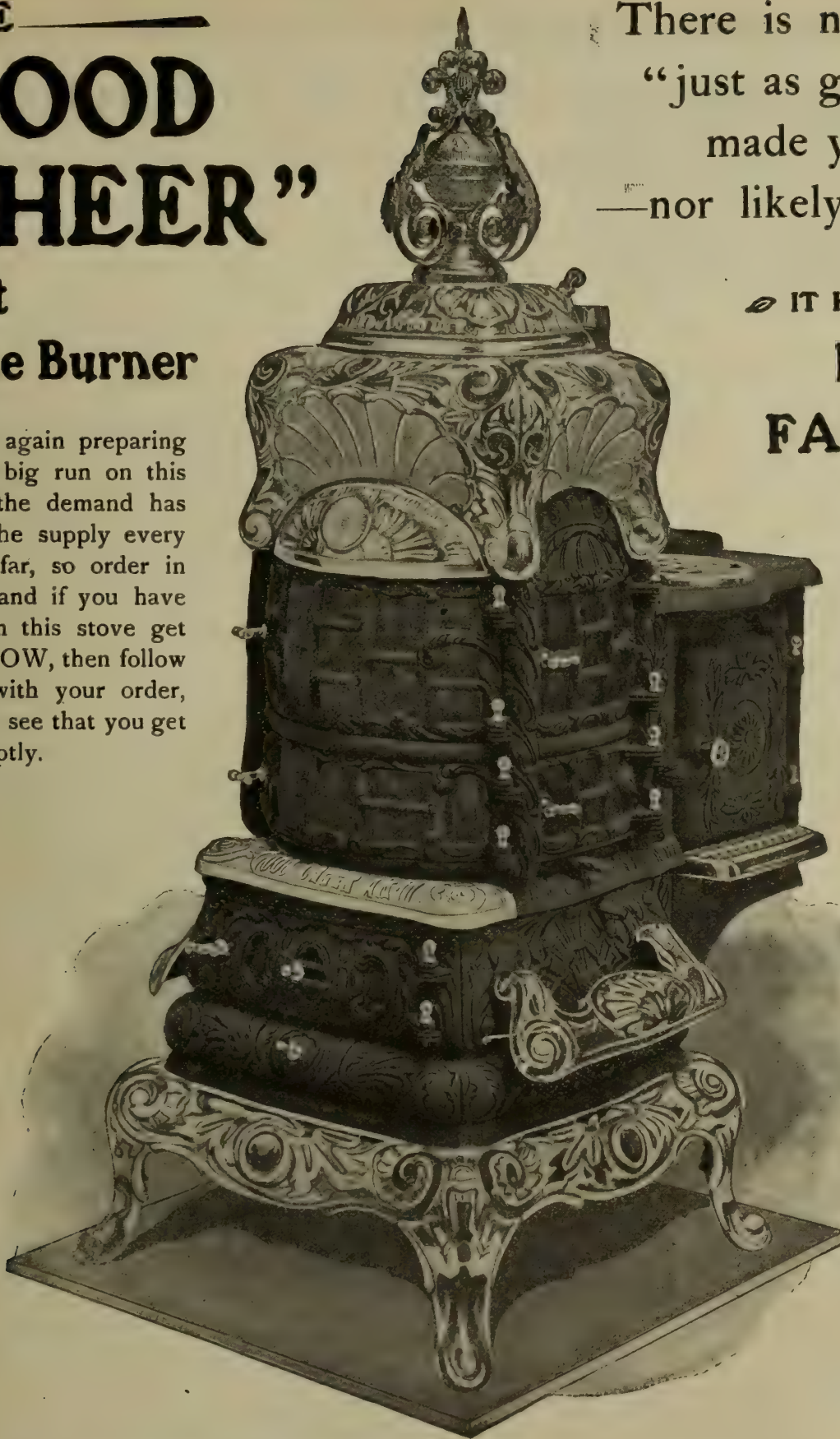
J. S. Montgomery, pair dwellings, near Harbord street, on west side of Euclid avenue, \$6,000.

Consumers' Gas Co, building for coal and coke, corner of Parliament and Front streets, \$40,000.

THE "GOOD CHEER"

Art Base Burner

We are again preparing for another big run on this stove, but the demand has exceeded the supply every season so far, so order in good time, and if you have not yet seen this stove get a sample NOW, then follow up quick with your order, and we will see that you get them promptly.



There is nothing
"just as good"
made yet
—nor likely to be.

IT HAS
**NO
FAULTS**

Firepot removable
without turning a
single bolt.

Has Duplex Grate
and large ash pan.

Every stove a
Double Heater.

Has Steel Oven.

With or without
oven.

The JAMES STEWART MFG. CO., Limited
Woodstock, Ont. and Winnipeg, Man.

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Secretary—J. A. Gordon, Montreal.
Treasurer—F. G. Johnson, Ottawa.

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Quebec—W. R. J. Hughes, Montreal.
Nova Scotia—James Farquhar, Halifax.
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Manitoba—James Mold, Winnipeg.
British Columbia—James Coughlan, Ottawa.

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Vice-President—W. J. Walsh, Hamilton.
Financial-Secretary—Lewis LeGrow, Toronto.
Treasurer—J. K. Wilson, Toronto.
Secretary—W. H. Meredith, Toronto.
Executive Committee—The officers and H. Mahoney, Guelph; S. Mellon, Hamilton, and E. H. Russell, London.

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President—Thos. O'Connell.
Secretary—J. Gordon.

TORONTO.

President—Robert Ross.
Vice-President—Geo. H. Cooper.
Secretary-Treasurer—W. H. Meredith.

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President—Gil. Julien.
Secretary—J. Thorpe Blyth.

LONDON.

President—B. Noble.
Vice-President—Wm. Smith.
Secretary-Treasurer—E. H. Russell.

THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Sept. 22, 1904.

HHEATING goods and apparatus are now in their busiest season and there is every indication that the volume of business will be well up to

that of other years. While ordinary plumbing supplies are moving well the heating trade is unusually brisk, so much so that some dealers are experiencing difficulty in filling immediate orders. No change whatever in price.

Range Boilers—The demand for these at present exceeds that of other years and promises to continue brisk. Quotations continue as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—A very active market. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—Orders for these are coming in in increasing numbers. Quotations are: Light soil pipe, 3 to 6 inches, 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe Fittings—Prices are still being cut so that it is impossible to quote with exactitude. The market is very active. We quote nominal prices. Discounts on all sizes up to six inch, 67 1-2 to 70 per cent.

Iron Pipe—There is a brisk demand for nearly all sizes of iron pipe during the present season, being considerably better than a week ago. There is still some cutting of prices, but our quotations remain the same.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.

Soldering Irons—Prices are as follows: 1 to 11-2 lbs., per lb, 37c; 2 lbs and over, 34c.

Ontario.

Office of HARDWARE AND METAL,

10 Front street east.

Toronto, Sept. 23, 1904

THE iron pipe market continues to fluctuate. Some dealers report a price which is considerably below that which has been ruling for some time, while others state that there is no change in quotations though lower prices are made for large buyers. There are some changes in the discounts on fittings. In other lines there is no change. An excellent business is doing throughout, especially in Toronto, where the ending of the builders' strike has brought renewed activity in plumbing operations.

Lead Pipe—A moderate trade is reported. We quote: Lead, 7c; lead waste pie, 8c; discount 35 per cent.

Soil Pipe and Fittings—A good demand is noted, with prices steady. Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe and Fittings—An improvement in the demand is noted. Prices are steady. We quote nominally: Malleable fittings 35 per cent for American and 20 per cent for Canadian; cast iron (standard), 60 to 60 and 10 per cent.; headers 55 per cent.; flanged unions, 60 per cent.; malleable bushings, 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fairly good trade is being done, affected to some extent by the general slackness prevailing. Discounts at 15 per cent. continue on the new prices issued some time ago.

Iron Pipe—Competition in this line has not been quite so keen during the last three or four weeks. Business is somewhat quiet, but dealers look for it to pick up soon. Prices are being cut freely but the general report is a continuance of nominal prices.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.



Just to introduce to you one of those money-making lines in the paint business

Ramsay's Rubber Roof Paint

made by special process, with strong elastic qualities, and a great paint to preserve the farmers' barns, outhouses, fences, etc.

If you have not already put in a line of this, try it for the Fall trade, and recommend it to your customers. You incur no risk in doing so; we fully guarantee it.

It is put up in gallon cans, you sell it at \$1.00 per gallon and make your profit.

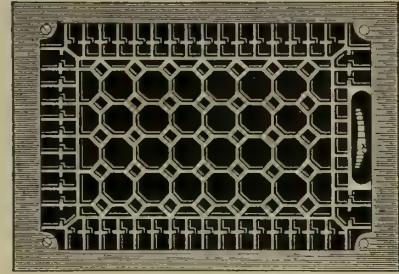
A. RAMSAY & SON COMPANY,

Established 1842.

MONTREAL.

Paint Makers.

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



The very best ideas, backed up by skill and conscientious work, produced the

Imperial Oxford Range

the perfect home cooking apparatus. It is easier to sell than any other range on the market because it is better. It stays sold because it gives satisfaction every day it is used.

If you want to sell the best range on the market write us for full particulars.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.

THE APPRENTICESHIP QUESTION.

FOR some time master plumbers throughout the United States as well as in many parts of Canada have recognized in "The Apprenticeship Question" one of the most serious problems of the trade. Consequently the report of the "Apprenticeship Committee" was one of the most important at the United States National Convention at St. Louis. For this reason we publish it in full this week:

St. Louis, Mo., Sept. 6, 1904.

Mr. E. D. Hornbrook, President National Association of Master Plumbers, St. Louis, Mo.

Dear Sir: The Apprenticeship Committee beg leave to submit for your consideration the following report:

The action of the convention in San Francisco in finally adopting the apprentice law has met with almost unanimous approval from all affiliated associations and the individual members, and, in many cases, the local associations have made haste to carry into effect the provisions of the rules there adopted. We have been in communication with many cities, and have on file numerous reports which deal with this question in detail, and which are attached hereto as part of this report.

In answer to a circular communication which was sent to all State and local associations, containing a copy of the apprentice law and blank to be filed with the National Apprenticeship Committee, we received in the neighborhood of 100 replies. Forty (40) of these replies furnish the information that a mutual agreement exists between the journeymen and the employers, but many of them have adopted the National apprenticeship rules in a modified form.

Among the replies received we report the following cities which have adopted rules based on National Association law: Green Bay, Wis.; Jamestown, N. Y.; East Liverpool, Ohio; Dayton, Ohio; Charleston, W. Va.; Richmond, Va.; Toledo, Ohio; Poughkeepsie, N. Y.; Providence, R. I.; Pittsburg, Pa.; Elgin, Ill.; Ottawa, Ill., and Grand Rapids, Mich.

The Michigan State Association Apprenticeship Committee complains of the utter lack of interest manifested by the master plumbers of that State on the apprentice question.

We select the following from among the reports received by us:

In the mutual agreement between the

journeymen and master plumbers of Paterson, N. J., Article 4 provides for an examination of the apprentice after he has served four years. Article 7 of the agreement calls for an examination of the journeyman as to his value to the employer.

San Francisco, Cal., is endeavoring to reach a mutual agreement, but up to the present has not been successful.

Add after first section that the boy must be 16 years of age, white and free-born. Also in regard to number of apprentices allotted to each shop to read as follows:

Each and every plumbing shop to be allowed at least one apprentice, and one additional for every three journeymen up to twelve. No shop to have more than five.

In Buffalo, N. Y., there is no agreement other than the rules of the journeymen, which provide for a limitation of apprentices.

San Diego, Cal., reports that under no consideration will the journeymen work with an apprentice, and in spite of all protests on the part of the master plumbers the journeymen refuse to alter their position. The local submits for our consideration the suggestion that the Master Plumbers' and the Journeymen Plumbers' National Committees meet and come to some joint agreement to be enforced throughout the country.

Salt Lake City reports that the only agreement they have is a one-sided affair in which there are no apprentices allowed.

LaCrosse Wis., has an agreement to abolish apprentices after those now employed are past apprenticeship.

St. Louis, Mo., has recently enlarged its Apprenticeship Committee, but all it can do at present is to discuss the question, as the journeymen plumbers refuse to work with any apprentices the master plumbers hire.

East St. Louis reports the same condition, but states that the agreement will expire May 1.

Chicago, Ill., where the limit of apprentices is controlled by teaching the trade only to sons of master and journeymen plumbers, writes that this condition is rapidly becoming intolerable, and the time has arrived when this restriction should be relaxed and some regulation adopted to permit a greater number to learn the trade.

Owing to the fact that it was found impossible to have a meeting of the Apprenticeship Committee we have concluded to submit the foregoing suggestions offered without any recommendations.

While on this question it occurred to us that in former reports too little attention was given to the theoretical teaching of the apprentice, and in order to be as fully informed as possible on this phase of the matter, communications were addressed to some of the trade and correspondence schools with the view of securing, if possible, data in their possession as to their methods of instruction, etc., so that we could lay before the association our conclusions and it could make its own deductions therefrom. However, it was thought best at this time to make a general report along this line leaving the making of a definite recommendation to a future date at the hands of a committee which would have the time and facilities at its disposal so that it could make a report that would deal with this question in all its details.

It is probably as important to the success of the mechanic that he thoroughly understands the theoretic science of the trade as it is to be a thoroughly practical workman. In each of our own experiences we have met with mechanics who were skilled workmen, but whose value was diminished from the fact that they were sadly lacking in the essential theoretical knowledge which modern sanitary science renders so very necessary. We must admit that the plumbing industry has attained a scientific prominence among all building crafts, which makes it easily the peer of all the others, and this statement we believe will defy successful contradiction. Now, are we, or have we been, keeping pace with this development? Some may truthfully answer that they were, but many would be compelled to admit that they had not, and even among the ones who believe they have kept in the front rank many would be found, upon a critical examination to be deficient. If this is the case, as far as we ourselves are concerned, how much more emphatically is it the case with the apprentice under our charge? And in looking for a remedy we become appalled at first glance at the size of the problem confronting us, and yet there may be a solution in the following suggestions, which, for convenience sake, are separated under the caption of "Theoretic

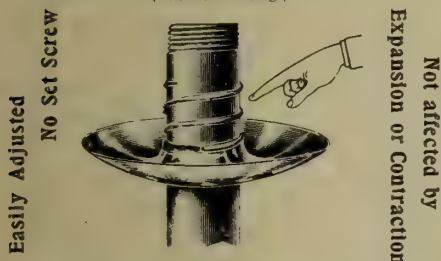
Have you
tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

**THE HOLDFAST
CEILING and FLOOR PLATE**
(Patent Pending.)



Manufactured only by Write for Samples and Discounts.
THE FAIRGRIEVE MFG. CO., Toronto, Can.
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**A PERMANENT
and Handsome Roof.**



Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to
lay, all ready covered with gravel. Requires no experience to lay, and lasts
for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write to-day.

When in want of

**Hayfork Pulleys,
Barn Door Hangers,
Jack Screws,**

**Mrs. Potts Irons,
Diamond Dampers,
Etc.**

Order from

The H. R. Ives Co., Ltd., - Montreal



New Process Oil Heaters.



Are absolutely safe.

Produce intense
heat without smoke.

Simple as a lamp in
construction.

Light

**and
Durable**

Founts are remov-
able for Cleaning
and Filling.

Provided with Bail
Handle with which
they can be easily
carried to any part
of the house.

The Thos. Davidson Mfg. Co., Limited

MONTREAL.

No. 10 - "New Process." Design attrac-
tive. Construction first-class.

No. 17 - "Standard." Cheaper in quality,
but well proportioned and handsome in
appearance, and a strictly up-to-date heater.

Instruction," and may be subdivided into three classes:

1. Text Books.
2. Correspondence Instruction.
3. Trade School Course.

Under the first item of "Theoretical Instruction" we class the many books printed dealing with the science of plumbing, both theoretical and practical, and may be procured at a very moderate cost. No matter how busy the master plumber may be he should try and could without doubt set apart a few hours each week wherein he could devote to improving the apprentice on the theory contained in the text books, and compelling him to study and to examine him to see if he has applied himself.

The second item is Correspondence Schools. The system of study adopted by these schools is peculiarly suited to improve the mind of the apprentice. Under their system of instruction the young man is taught the many little theoretic details which are usually overlooked as unimportant, but which in time prove their value in addition to the fact that this knowledge is no burden to carry. The course of instruction taken from letters received consists of arithmetic, plumbing and drainage, heating and ventilating and mechanical drawing.

In connection with the above it has just been suggested that after the boy has served six months at the trade and proved his efficiency, the employer could purchase for him a scholarship, and his application to said scholarship should be made a condition of employment. It could, no doubt, be arranged with the school that reports be mailed to the individual master plumber, so that he could keep informed of the progress the student has been making and be prepared to act accordingly.

In connection with items No. 1 and No. 2 it might be further suggested that night schools be inaugurated by the various locals wherein the boys could be reviewed and difficult problems propounded and explained. This could be so systematized that every advantage would be in the boy's favor. Classes could be arranged and the apprentice advanced step by step as he mastered the problems presented to him.

This suggestion could be adopted and inaugurated with but comparatively little expense, and the details should be left in the hands of the local Apprenticeship Committee. In large cities a teacher might have to be employed to devote his entire time to this matter,

and in smaller cities a modification of this plan could be adopted.

This now brings us to the third item of "Theoretical Instruction," and that is the Trade School, for despite claims to the contrary, we can only accord to them a position under that caption. We are not prepared to grant that it is at all possible to teach the practice of plumbing in an industrial school, as is generally supposed by the misinformed. In justice to the trade schools it must be said that they hold an entirely different view of the matter. We quote from a letter received from Mr. Brill, Superintendent of the New York Trade Schools:

"We believe that it is the combination of the trade school and the workshop that is best suited to modern conditions in training young men who desire to become mechanics; the school to give the young men skill in the use of tools and materials and a knowledge of theory and drawing, the workshop to give them the necessary experience, facility and speed of execution in doing work."

Further along in the letter Mr. Brill makes a suggestion which we deem worthy of your earnest consideration. It is as follows:

"I believe it will be found feasible for each local association to maintain evening plumbing schools. The item of expense would not be great for you will find that ambitious young men are only too willing to pay for their tuition, if assured of a chance of completing the trade, and of getting employment. The tuition fee will come very near paying the cost of maintaining such classes. It would not be necessary to specially build trade school shops. There exist in nearly all cities evening schools of some kind in which space could be hired to equip as a workshop by the local association. The association could, through a committee, provide a course of instruction and retain supervision and control of the class. In time a standard course, similar to ours, could be put in operation in all sections of the country and which could be conducted under the same conditions as exist between the New York Association and the New York Trade Schools."

The condition mentioned by Mr. Brill is briefly that the local in New York co-operate with the school. They appoint a committee of five members who visit the school at odd times during the session to observe the classes at work. This committee advises the school as to the progress going on in the trade and

recommends improvements in the course of instruction. At the conclusion of the term the committee examines the class and determines who are entitled to certificates of graduation.

Vice-President Craig, of the National Association, in his communication on the trade schools, brings to our attention a deplorable condition namely, that for some unexplained reason the apprentice loses interest in the course of instruction after one term. It may be due to the fact that licenses are easy to secure, he states, but it is certain that a lack of interest does obtain and the solution causes grave concern.

Another method occurs to us and that is, that a post graduate course (so to speak) could be inaugurated whereby the apprentice could receive the benefit of the trade school system, and this course of instruction could be made a condition of employment. In fact, to surmount any objection that the apprentice himself might make, he could be informed that this course of study was as necessary to perform as any other task set for him to do, and that if he was not as faithful and as diligent in that feature of the business that he would be liable to dismissal. If necessary this technical education should be made compulsory.

It may be urged by some that if the apprentice fails to avail himself of the opportunity now accorded to him he himself would be the loser, and this we are prepared to admit but at the same time while he may be the direct loser, the general public are the ones who suffer, consequently we should leave nothing feasible untried to facilitate the proper education and instruction of the young men in the trade.

It is suggested by the committee that the next Apprenticeship Committee appointed be empowered to visit, if found necessary, the Trade or Correspondence Schools; purchase and examine into different classes of text books, and to report at the next convention a plan whereby the theoretical instruction can be imparted to the apprentice in the trade. The committee to be under the supervision of President and Executive Board as to the expense they shall incur in said investigation and such other limitations as may be imposed by the Board on said committee.

In concluding this report the committee desire to tender their thanks to all who have aided them in their investigations. In all cases our requests for information were cheerfully complied with and their co-operation assured.



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The work of the Apprenticeship Committee was apparently concluded by the adoption of the San Francisco report, at least it was supposed that its work hereafter would be mainly statistical, and would deal largely in figures, but the condition that confronts us at the commencement of this term leads to the belief that we are only at the beginning of the work, and if the condition exists and which we have no reason to doubt, namely, that an evening class in one of the trade schools made up almost entirely of apprentices or helpers having served two or three years, when they came to the school knew practically nothing of the trade, and upon questioning, answer than no interest is taken in them by the men with whom they are employed. And yet by the rules in the trade they are supposed to be journeymen after having worked a certain number of years.

The above is a quotation from a letter received by the committee, and with it naturally comes this conclusion. Under these conditions it is not surprising that there are so many inferior workmen in the trade.

No, gentlemen of the convention, the work of those in charge of the apprentice has not been concluded, nor can we rest on laurels already won. True it is that the work of the National Association has met almost universal approval and the only adverse criticism offered which came to our notice was personal rather than against the association and cannot be considered, but yet a great deal can be done, and will be, we have no doubt.

If the future history of the association which is filled with great promise be but a reflex of its past glorious existence during which time so much good has been accomplished, how vast our opportunities to confer a lasting benefit to our protege, the apprentice, and how eagerly we will lend our aid to the task set before us is best evidenced by the work already performed. Were it on the lines of the apprentice alone, the association has justified its glorious existence, and will continue to advance along the same line, until the time will come when, looking backward over years of toil of effort and of struggle, we can have the satisfaction of viewing an institution of instruction which will be a source of gratified pride, and this gratification produce the restfulness which comes of a task successfully completed and a duty cheerfully performed.

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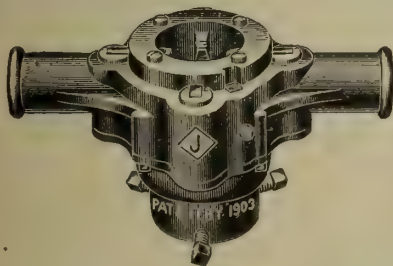
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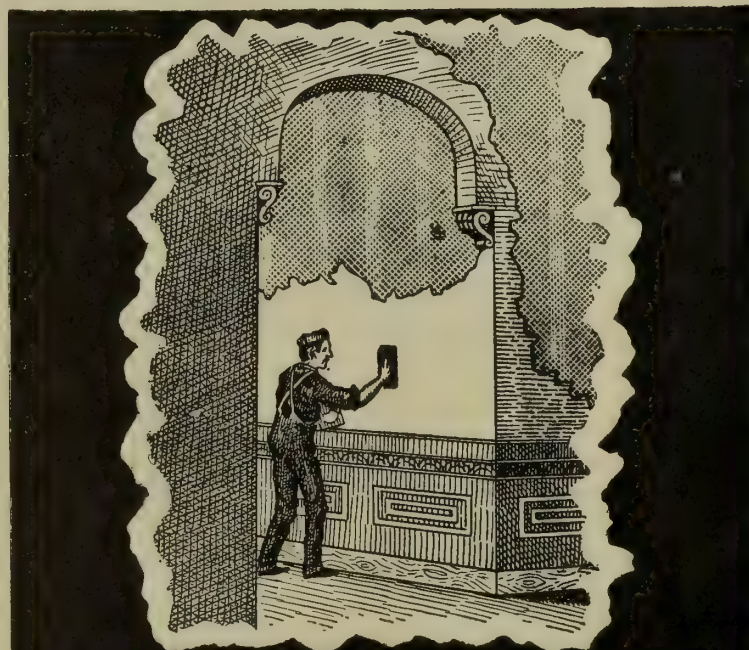
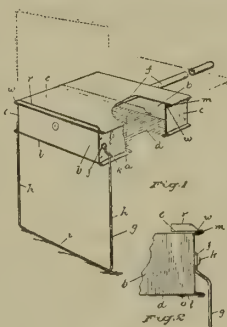
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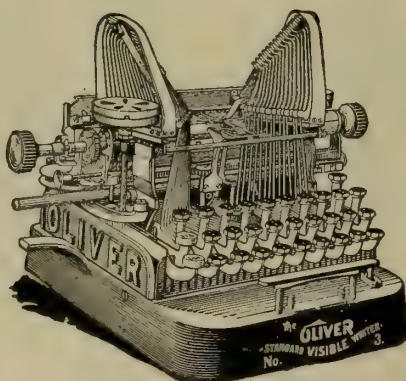
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A SUGGESTION FOR THE COLLECTION DEPARTMENT.

By Henry Wheeler.

A GREAT deal of unnecessary trouble and detail is gone into in making collections on the accounts of the average retail house. A study of the ledger cards is usually made, and efforts made to collect once a month or oftener. The writer has found that a good way to handle these matters is to have a statement made of every account which is due. Of course this statement should be made in duplicate, using carbon paper for the duplicate copy. Thus one statement can be sent to the customer and the other retained for a collection record.

A suitable file (provided with guide cards, showing days of the month) is used and as a statement is sent out to a customer, its duplicate is placed in an appropriate division of the file.

We will say that the cashier makes up his mind that this account should be paid in ten days or something further done about it. He will thus put the duplicate statement into his file ten days ahead of the date the statement is sent. Each day he takes out of its compartment the papers applying to that day's work, and he is then in a position to take whatever action he deems necessary.

The duplicate statement shows just how old the account is and a reference to the ledger will show whether any payment has been made. As the ledge folio or the card number will appear on the statement, reference to the ledger will be very easy.

If, after investigating this particular case, he comes to the conclusion it will be wise to wait a little longer, he can file the statement over again under the date he determines on for the next action on the subject.

If he thinks it would be expedient to write a letter to the debtor just at that time, the letter can be written and the whole thing filed ahead to come up when he expects to take further steps to collect.

In writing collection letters, it is always well to set a certain definite date on which you expect a response. If the response is not forthcoming at that time you have something definite on which to base your demand upon the debtor.

Thus the account, when it becomes delinquent, is always kept before the party who has charge of the collections and it is never in danger of being overlooked or "sidetracked."

It is sometimes deemed expedient to mark the ledger page or ledger card, showing that the account has been

placed in the hands of the collection department for action, and thus the cashier or bookkeeper is relieved of the necessity of making a new statement each time a set of statements is drawn off.

It is usually the case in most establishments that delinquent accounts cease to be active; that is to say, while they are delinquent no further goods are purchased, and so long as this is the case there would be no necessity of a new statement until the account was settled and the delinquent debtor could again become a customer and his account again becomes active.—The Book-keeper.

HIS ROYAL HIGHNESS—THE BOOKKEEPER.*

By Harry W. Mann, St. Paul, Minn.

THE term "bookkeeper" is fast falling into disfavor; it is getting too common for the average young man and gives the impression of a second-hand amateur. This calls to mind a little incident which occurred in one of our wholesale dry goods establishments on Third street, 'way back in the seventies. The firm had just completed an anniversary after a year of very good results, and of which they were not ashamed, as they seem to be now. It was the good old times of small sales and large profits. Their employes were all called together one afternoon and "refreshments" liberally passed around and considerable self-laudation indulged in. In the midst of the general jollification a voice was heard from somewhere in the piles of dry goods "Hi! and I'm the bookkeeper!" Johnny was bound to have his share of the glory.

For one, I do not believe in the passing of the bookkeeper; the name fits him all right if he upholds the standard of his duties to his employer. An accountant is his own master; he is never graduated; he is evolved out of the school of varied experiences. The duties of an accountant are as responsible as those of an attorney, and his thoroughness and skill can do much to make or mar the business.

Our subject then will consider the bookkeeper as he is, or, if preferable, he can be viewed as the accountant bookkeeper, a man selected by the concern for his integrity, accuracy and ability to execute the duties of the position, and necessarily worthy of the confidence which must be placed in him. We are not speaking of the posting and adding machine, the mechanical doer of things, whose thinking and habits are in the rut, but of the hard-working, old-time confidential clerk of a large mercantile establishment. Let us consider our friend under three different phases: His relation to the credit depart-

* An address delivered before the Minneapolis Society of Accountants and Bookkeepers.

ment; his relation to members of the firm; his relation to himself.

The credit man is the extra special express of the whole business system, and the track must be kept clear for his run. It makes no difference what other trains are to be sidetracked or what inconvenience it makes, a clear track signal must meet his eye at every station. It should be the bookkeeper's chief duty to find out from experience what information the credit department usually use in their work, he should so keep his books that this information is instantly obtainable without the annoyance of hunting up original entries, or wasting time looking for letters; the postings must be always kept up as close as possible, and never behind; charges posted as soon as billed, cash posted as soon as received, allowances can show what made for, and notes can be entered to tell when due and if paid; the account should show at a glance if discounts, how much owing, due or past due, when last statement sent, whether draft made, and much other information which if not at hand would require considerable time to ferret out. Every facility must be afforded the credit man, whether it comes in the daily routine or under some special or extraordinary information. He should be advised daily of amount of collections, amounts of due notes on hand or discounted, amount of outstanding accounts, as well as of payments. The credit department may often seem unreasonable in their demands on the bookkeeper, and their methods may seem open to improvement, but the annoyance should not be considered. Every nerve must be strained to facilitate the safe placing of orders and quick collection of accounts. This means a great deal of unnoticed work on the books, with considerable nervous energy expended and unappreciated zeal, but it's the necessary duties of the position; it's the place of the bookkeeper to furnish the steam for the motive power and let the engineer and the powers that be do the rest.

Our friend's relation to his employers is one requiring very delicate adjustment and must necessarily be of a confidential nature. The trouble seems to be with the majority of bookkeepers that when they acquire certain information, the microbe of a swelled head and self-conceit go with it, and they are liable to imagine that the whole business, profit and—no, not losses—depend on themselves. Employers evidently have occasional mirthful soliloquys over the theme, "Who owns the business?"

The employers should advise the bookkeeper what certain information they desire for the running of their business, and then it is up to him to keep them advised of this information in a compact form with all details ready for inspection. He must first satisfy them in regard to his methods, which must be open in every particular and so well safeguarded that one section dovetails into another, and the whole scheme may be intelligently inspected by any of the firm at any time. A system of daily and weekly reports and monthly comparisons may prove of great value. A monthly balance sheet can demand interesting and profitable consideration and is more than a mere grouping of figures; and yet too much detail would be tiresome and make the correct conclusion hard to arrive at. In a mercantile house a correct monthly asset and liability statement of affairs is almost an impossibility because the actual amount of merchandise on hand is not obtainable (though it may be closely estimated), as well as many other accounts which cannot be equitably adjusted every month. The balance sheet can only serve as a regulator of the business by comparison and percentage estimates; it is not so much a question of how large the sales are as it is how do the expenses compare with the percentage of profits; can the expenses be

made elastic in proportion to the sales; it's an easy matter to increase the sales and probably increase the gross profits, but does the capital invested reap the benefit? Here is where the accountant makes himself valuable by showing information along this line. Probably the best form of balance sheet is one based on the published bank statements, grouping the accounts together in eight or a dozen items, thus enabling the eye to see the state of affairs without wading through a wilderness of figures; of course, the detailed statement is ready when required.

The yearly balance sheet should prove a source of great pride to the bookkeeper, as does the finished structure to the architect. This is what makes the drudgery throughout the year bearable. The gathering together of all the numerous items and grouping them intelligently into facts, proving the soundness of past and future bearings by percentages, showing where the weak spots may be and making a basis for future operations. There's a sea of innumerable figures between the two inventories, but it's a great satisfaction to let the employers know just where they stand, and—"virtue is its own reward."

The bookkeeper's relation to himself is something of an understudy which requires the pen of an artist to do it full justice. He has to do a great deal of work which does not show for the amount of time spent upon it, and he has to do his work as the opportunity offers—it frequently seems like crossing a swift stream by jumping from one stone to another and being continually on the alert. The daily work must be kept up to enable the credit man to have a clear track—this might be easy enough except that usually ninety-nine days out of a hundred a snag of some kind interferes and occupies a good many minutes of time; then there may be a long statement to average or a complicated account to adjust, and meanwhile the regular work is grinding out—or it is very much like digging into a pile of sand; as fast as one shovelful is taken away, more sand is falling down. No wonder the poor fellow has nerves. Even all these interruptions might prove of value to the discipline of his character, but when it comes to trial balances, the patience of Job has a strong rival. It matters not what system is used, nor how correct one may be, it's the nature of figures to elude your vigilance. It has been said that on the large passenger boats on the eastern waterways they are required to keep two pilots constantly on duty, as it is claimed that the human mind is likely to make a blunder unconsciously. Such a thing may happen very seldom, but where human lives are concerned there must be no chances. A bookkeeper may surround his work with all possible proofs and safeguards, but sometimes the eye gets tired and the mind becomes mechanical and the brain is indulging in some happy reverie; then it may be that a little error creeps in while the work goes on under the calm assurance that a mistake would be detected at once. When the trial balance is taken off there is something wrong. Then comes the weary hours of proving up and hunting for the trouble. It might be a pleasant piece of detective work to ferret out a mistake and run it to cover, but think of the time it takes! and time that don't count, and meanwhile the sand pile is growing larger. Here is where the employer is unappreciative; he is paying for results and cannot understand why so much time is required on a small balance sheet, never thinking of the trial balance. A bookkeeper must do all his hunting after hours, and between bites, as it will not do to allow any of the machinery to run slow or interrupt the routine of others. A large percentage of a bookkeeper's time is burned up looking for mistakes of his own or of others. It is the nature of the business! If he were infallible and trial balances were not necessary, his position would be of a decidedly pleasant nature. The trial balance is a great trial of patience, energy and nerves; it is not the work itself, but the time it takes to go over the ground. Great progress has been made within the past decade to facilitate this branch of work, and properly handled, it may be robbed of many of its terrors.

This list is for the purpose of placing retailers, manufacturers' jobbers and other readers in touch with reliable and competent accountants and auditors whose services are so frequently required for such purposes as opening books,

Leading Canadian Accountants and Auditors

adjusting and auditing accounts, arranging partnerships or organizing joint stock companies, devising special office systems, making collections and investigations, handling estates, making valuations, etc.

DAVID HOSKINS, F.C.A.

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Auditor,

Financial Valuator.

27 Wellington Street East,
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505 McKinnon Bldg., - Toronto.

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Regular and Special Audits.

27 Wellington St. E.,
'Phone Main 4744. Toronto.

This list is for the purpose of placing manufacturers, wholesale and retail merchants and other readers throughout Canada, and firms abroad doing business in Canada, in touch with the legal profession throughout the Dominion, for the collection of accounts, legal representation,

LEGAL CARDS.

organization of companies, the arrangement or dissolution of partnerships, or assignments, as well as all other matters of a legal nature.

For advertising rates apply to MacLean Publishing Co., Limited, Montreal or Toronto.

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This Space \$15 a Year.

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A. Duclos. Henry N. Chauvin.

Educational Department.

The following institutions for the education of business men's sons and daughters are recommended by this paper:

LEARN TO ADVERTISE YOUR STORE

or if you have not time yourself, pay for a course for one of your bright clerks. Get booklet on our specialized course in advertising. Tells about our new method of advertising study.

SEPARATE COURSE FOR EACH LINE OF BUSINESS

Our method is absolutely new and practicable. It tells you all there is to learn about advertising your particular goods.

GOOD ADVERTISING IS TO-DAY THE BASIS OF SUCCESS

Begin now; take our course of study and learn to advertise your store. We look after your ads. while you take your course. Send for our booklet.

CANADIAN CORRESPONDENCE COLLEGE, Limited

Phone Main 4302

161 Bay St., TORONTO

FIRST-CLASS

TELEGRAPH OPERATORS

SUPPLIED AND TRAINED BY

METROPOLITAN
Business College
- OTTAWA, ONT. -

R. A. FARQUHARSON, B.A., Principal.

Western Business College

Cor. College and
Spadina avenue, TORONTO.

Thorough courses in Bookkeeping, Stenography, Typewriting
and Penmanship; individual instruction.

A. J. HOARE, Principal.

St. Margaret's College, Toronto

A Boarding and Day School for Girls.
Thorough courses in every department.

Only teachers of the highest academical and professional standing employed.

GEORGE DICKSON, M.A.,
Director.

MRS. GEORGE DICKSON
Lady Principal.

1889.

The Belleville Business College, Limited,

Business firms get the best results by applying to us 10 days before vacancies occur in their employ.

See Catalogue pages 21, 27, 33, 41.

J. A. Tousaw, }
Secretary.

BELLEVILLE,
ONTARIO.

{ J. Frith Jeffers, M.A.,
President.

One inch space in this dept. \$45 per year.



TORONTO'S QUICK AND SURE PRINTERS

We do all kinds of good printing cheap. Let us handle your next order and you will be satisfied. Latest styles in Type and Borders. Everything up to date.

1,000 LINEN LETTERHEADS THIS MONTH, \$2.50.

G. A. Weese & Son, 44 Yonge St., Toronto.

ADVERTISE YOUR BUSINESS


Write for particulars about our cuts and ads. from 50 cents up. To advertise in newspapers. Catchy ideas to catch business. Given to one merchant in a town. Send us your ads. and we will criticise them free. WRITE TO-DAY.

GEO. J. SMITH BUREAU, 621 BROADWAY, N.Y.

WE WRITE ADS. IN FRENCH.

WE TALK QUALITY WITH CONFIDENCE

because we know that our

Ready Roofing, Sheathing and Black  Diamond Tarred Felts,
Building Papers, Fibre and Manilla Wrappings, etc.,
are unexcelled.

Ask for our quotations—they will interest you.

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLIETTE, QUE.

ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET, MONTREAL

CURRENT MARKET QUOTATIONS.

Sept. 23, 1904.

BABBIT METAL.

"Tandem," A.....	per lb.	0 27
" " B.....	"	0 21
" " C.....	"	0 11 1/2
Frictionless Metal.....	"	0 23

Syracuse Smelting Works:

Aluminum, genuine.....	0 45
Government,.....	0 44
Tough,.....	0 40
Hard,.....	0 40
Dynamo.....	0 30
Special.....	0 25
Harmony.....	0 22
Car Box.....	0 20
Extra.....	0 15

The Canada Metal Co.:

Imperial, genuine.....	0 40
Metallic.....	0 30
Hercules.....	0 20
Star.....	0 15
No. 1.....	0 12
No. 2.....	0 10
No. 3.....	0 06
No. 4.....	0 05

Geo. Langwell & Son.

No. 1.....	0 08
No. 2.....	0 07
No. 3.....	0 05 1/2
Extra.....	0 09 1/2

BLACK SHEETS.

	Montreal	Toronto
10 and 16 gauge.....	2 25	2 50
18 gauge.....	2 30	2 50
20 ".....	2 30	2 50
22 to 24 gauge.....	2 35	2 70
26 ".....	2 40	2 80
28 ".....	2 40	2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary.....	2 50
All bright.....	3 50
Galvanized Canada Plates—	

Ordinary. Dom.

18x24x52.....	4 25	4 35
" 60.....	4 50	4 60
20x28x80.....	8 50	8 70
" 94.....	9 00	9 20

GALVANIZED SHEETS. Queen's

Fleur-de-Lis, Gordon Crown, Comet Bell, Head	
16 gauge.....	3 65
18 to 24 gauge.....	3 75 3 50 3 75 3 75
26 ".....	4 00 3 75 3 90 4 00
28 ".....	4 25 4 00 4 05 4 25
American brands, \$4.00 for 10 1/2 oz.	
Less than case lots 10 to 15c. extra.	

CHAIN.

Proof coil, 3-16 in., per 100 lb.	7 00	10 00
" " 5-16 ".....	5 60	
" " 7-16 ".....	4 45	
" " 9-16 ".....	3 85	
" " 1 1/4 ".....	3 70	
" " 1 1/2 ".....	3 55	
" " 1 3/4 ".....	3 45	
" " 2 ".....	3 25	
Halter, kennel and post chains, 40 to 40 and 5 per cent.		
Cow ties.....	40 p.c.	
Tie out chains.....	65 p.c.	
Stall fixtures.....	35 p.c.	
Trace chain.....	45 p.c.	
Jack chain, iron, single and double, discount 35 p.c.		
Jack chain, brass, single and double, discount 40 p.c.		

COPPER.

	Ingot.	Per 100 lb.
Casting, car lots.....		13 75
Cut lengths, round, 1/2 to 1 in.	21 00	23 00
" round and square, 1 to 2 inches.....	21 00	23 00

Sheet.

Plain, 16 oz., 14x48 and 14x60.....	20 00
Plain, 14 oz.,.....	21 00
Tinned copper sheet.....	24 00
Planished.....	32 00

Braziers' (in sheets).

4x6 ft., 25 to 30 lb. each, per lb.....	0 22
" 35 to 45 ".....	0 21
" 50-lb. and above ".....	0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb.....	0 28
Spun, per lb.....	0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.	0 23
Sheets, hard-rolled, 2x4.....	0 23 1/2
Tubing, base, per lb.....	0 23 1/2

ZINC SPelter.

Foreign, per 100 lb.....	6 00
Domestic.....	6 25

ZINC SHEET.

5-cwt. casks.....	6 15
Part casks.....	6 50

LEAD.

Imported Pig, per 100 lb.....	3 20
Bar, per lb.....	0 05
Sheets, 2 1/2 lb. sq. ft., by roll.....	0 06 1/2
Sheets, 3 to 6 lb.....	0 06

NOTE.—Cut sheets 1/4 c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. fies. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's.....	per lb. 7 50	8 00
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SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck, seal and ball, \$7.50. Discount, 1 1/2 p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax. Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.	
Zinc.....	6 00
Copper, discount 20 per cent. off revised list.	

BATHS.

Standard Enameled.	
5 1/2-ft. 2 1/2 in. rolled rim, 1st quality.....	21 60
" 2nd ".....	16 35

CLOSETS.

Fittings.....	1 00
Plain Simplex Syphon Jet.....	9 60
Emb.....	9 50
Fittings.....	1 25
Low Down Elgin or Feutonic, plain.....	6 00
Low " emb.....	6 50
Connection.....	1 25
Plain Richelieu.....	4 25
Emb.....	4 50
Connections.....	1 25
Basins, P.O., 14-in.....	0 63
Basins, oval, 17 x 14-in.....	1 50
Basins, " 19 x 15-in.....	2 00

IRON PIPE.

Black pipe—	Per 100 feet.
1/2 inch.....	
" 3/4 ".....	
" 1 ".....	
" 1 1/4 ".....	
" 1 1/2 ".....	
" 2 ".....	
" 2 1/2 ".....	
" 3 ".....	
" 3 1/2 ".....	
" 4 ".....	
" 4 1/2 ".....	
" 5 ".....	

Galvanized pipe—

1/2 inch.....	
" 3/4 ".....	
" 1 ".....	
" 1 1/4 ".....	
" 1 1/2 ".....	
" 2 ".....	

Malleable Fittings—Discount 20 p.c.

Cast Iron Fittings—Standard, 57 1/2 per cent.; unions, 55 per cent.; on nipples, headers and flanged unions, 60 per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dis. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra discount 10 per cent.
Lever handle Stops and Waste, discount 60 per cent. With in lots of 2 dozen and over, an extra discount of 10 per cent.
J.M.T. Globe, Angle and Check Valves, discount 55 per cent.
Standard Globe, Angle and Check Valves, discount 65 per cent.
Kerr's special standard globes and angles, discount 60 per cent.
Kerr's Jenkin disc, copper-alloy disc and heavy standard valves, discount 60 per cent.
Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator valves, discount 70 per cent.
Kerr's Jenkin disc, copper-alloy disc radiator valves, discount 70 per cent.
Kerr's quick-opening hot-water radiator valves, discount 70 and 10 per cent.
Weber's (Kerr) patent straightway gate valves, brass, discount 55 per cent.
Weber's (Kerr) patent straightway gate valves, I.B.E.M., discount 70 per cent.
J.M.T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 65 per cent.
Patent Quick-Opening Valves, discount 65 per cent.
No. 1 compression bath cock.....net 1 75
No. 4 "....." 1 90
No. 7 Fuller's....." 2 10
No. 4 1/2 "....." 2 25
Patent Compression Cushion, basin cock, hot and cold.....per doz. 15 00
Patent Compression Cushion, bath cock, No. 2208....." 2 25
Square head brass cocks, discount 55 per cent. iron " 50 to 60
Thompson Smoke-test Machine \$25.00

RANGE BOILERS.

Copper, 30 gallon.....	22 00
" 35 ".....	24 00
" 40 ".....	28 00
Discount off copper boilers 15 per cent.	

SOLID PIPE AND FITTINGS.

Light soil pipe, discount, 50 per cent. fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60 per cent.
and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.

	Per lb
Bar, half-and-half, guaranteed.....	0 18
Bar, half-and-half, commercial.....	0 17

WRENCHES.

Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 20 to 25 per cent.
Towers' Engineer.....each 2 00 7 00
" S.....per doz. 5 80 3 40
G. & K.'s Pipe....." 1 00
Burrell's Pipe.....each 0 25 2 90
Pocket.....per doz. 0 25 2 90

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity 4c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 25
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 06
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb	3 87½
Whiting, bbl	9 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Easer Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25
Genuine, 100 lb. kegs	4 75
No. 1, 560 lb. casks, per cwt	4 00
No. 1, 100 lb. kegs, per cwt	4 25

WHITE ZINC.

Extra Red Seal	0 06
French V. M.	0 06½
Lehigh	0 06

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co's pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts' "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
" Thistle, " "	1 00
" Outside, bbls	0 55
Island City House Paint	1 25
" Floor	1 25
Sterling House Paint	1 20
" Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots. Per gal. Net.

Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
rubbing	2 85	3 20
Gold size, japan	1 50	1 60
Elastic oak	1 10	1 25
No. 1 brown japan	0 85	0 90
Furniture, extra	1 10	1 25
No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
orange	2 30	2 40
Purpentine, brown japan	1 10	1 20
black japan	1 10	1 20
No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granitine floor finish, per gal	2 75	
Maple Leaf coach enamels; size 1,	\$1.20	
size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, assorted		
case, from	to 1 gal., \$2.50.	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatin	0 18	0 20
Strip	0 18	0 20
Coopers	0 18	0 20
Hutner	0 18	0 20
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent. Rim Fire Pistol, discount 30 p.c. American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c. Central Fire, Military and Sporting, American, add 20 per cent. to list. B.B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 5 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.

Woodyatt Hudson, per doz., net	4 50
Gilmour's, discount 65 and 5 per cent. off list.	

AXES.

Chopping Axes	
Single bit, per doz.	7 00
Double bit, " "	10 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50
Boys' Axes	6 25
Splitting Axes	7 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys', handled	5 75
hunters	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.

Ordinary, per gross	6 00
Best quality	10 00

BELLS.

Hand.

Brass, 60 per cent.	
Nickel, 55 per cent.	
Cow.	
American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.

Gongs, Sargent's	5 50
Peterboro', discount 50 and 10 per cent. off new list.	8 00

Farm.

American, each	1 25
House.	3 00
American, per lb.	0 35

House.

Hand, per doz.	3 35
Moulders, per doz.	7 50
Blacksmiths', discount 40 per cent.	10 00

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITS.

Gilmour's, discount 50 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.

Gilmour's, 47½ per cent.	
Expansive.	
Clark's, 40 per cent.	

Gimlet.

Clark's, per doz	0 65
Diamond, Shell, per doz	1 00
Nail and Spike, per gross	2 25

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½
--------------------	-------

BOLTS AND NUTS.

Carriage Bolts, common (\$1 list)	
" " 3-16 and ½	60 and 10
" " 5-16 and ½	55 and 5
" " 7-16 and up	55 and 5
" " full sq. (\$2.40 list)	60
" " Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., ½ to 60.	

BOOT CALKS.

Small and medium, ball	per M. 4 25
Small heel	" 4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.	
------------------------	--

BUTCHERS' CLEAVERS.

German	per doz. 6 00
American	" 12 00

BUTCHER KNIVES.

Bailey's	per doz. 0 60
----------	---------------

BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb.	
per roll	0 90
Ready roofing, 3-ply, not under 65 lb.,	
per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & L. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 600 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof " small packages	" 0 25
Refined Tar	per barrel 5 00
Coal Tar	" 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 00

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90 for 2-inch.	
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BUTTS.

Wrought Brass, net revised list.	
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Cast Iron.

Loose Pin, discount 40 per cent.	
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Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. Bronzed	per pair 0 40

CARPET STRETCHERS.

American	per doz. 1 00
Bullard's	" 6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross 7 50
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CHALK.

Carpenters' Colored, per gross	0 45
White lump	per cwt. 0 60
Red	" 0 05
Crayon	per gross 0 14

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,	
per doz	\$4 00
" " " 25c. pkgs., " "	2 00
" " " 10c. " "	75
" " " 25-lb. pall, each	1 30
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz	1 25
Worm	" 1 25
International 1 Stock Foods, \$1 packages,	
per doz.	8 00
International Stock Foods, per pall	2 75
" " " "	10 50
" " " " \$1 pkgs. per doz.	8 00
" " " " Worm Powders, 50c. pkgs.	4 00
" " " " Pine Healing Oil, per doz	8 00
" " " " Pheno-Chloro, \$1 pkgs. per doz	8 00
" " " " Hoof Ointment	8 00
" " " " Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.	

CLIPS.

Axle, discount 65 p. cent.	
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An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D. No. 3	per pair	0 17½
S. & D. " 5	"	0 22½
S. & D. " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coil, 9 to 11 in.	"	0 95
English	"	2 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Willar's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.
Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHS.

10-inch per 100 ft. 10 00

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35
Polished, 15c. per dozen extra	"	

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	70 and 10 per cent.
Arcade	70 " 10 "
Kearney & Foot	70 " 10 "
Diston's	70 " 10 "
American	70 " 10 "
J. Barton Smith	70 " 10 "
McClellan	70 " 10 "
Eagle	70 " 10 "
Nicholson, 60 and 10 to 60, 10 and 5	"
Royal	80 " "
Globe	70 to 75 " "
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.	"
Jowitt's, English list, 25 to 27½ per cent.	"
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50	"

GLASS.

Window. Box Price.

Size United Inches.	Per 50 ft.	Star Per 100 ft.	D. Diamond Per 50 ft.	Per 100 ft.
Under 26	3 80			5 06
26 to 40	4 00			5 44
41 to 50	4 50			6 56
51 to 60	4 75			7 50
61 to 70	5 00			8 62
71 to 80	5 30			9 38
81 to 85				10 75
86 to 90				12 30
91 to 95				15 00
96 to 100				18 00
Discount 15 per cent				

GAUGES.

Marking, Mortise, Etc.

Stanley's discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each 1 65 2 40
GILLET'S POWDERED LYE.
1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.

HALTERS.

Rope, ½-inch	per gross	12 00
Rope, ¾-inch	"	9 00
Rope, 1 to 1½-inch	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1½ "	"	5 20
Web	"	2 45

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

Tack.

Magnetic per doz. 1 10 1 20

Sledge.

Canadian per lb. 0 07½ 0 08½

Ball Pean.

English and Canadian, per lb. 0 22 0 25

HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

Store door per doz. 1 00 1 50

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. 1 00 1 25

Plane.

American per gross 3 15 3 75

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

Steel barn door	doz. pairs	8 00 10 00
Stearns, 4-inch	"	4 50
" 5-inch	"	6 00
Zenith	"	9 00
Lane's covered—	"	
No. 11, 5-foot run	"	8 40
No. 11½, 10-foot run	"	10 80
No. 12, 10-foot run	"	12 60
No. 14, 15-foot run	"	21 00
Steel, covered	"	4 00 11 00
" track, 1 x 3-16 in (100 ft)	"	3 75
" 1½ x 3-16 in (100 ft)	"	4 75

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

Shingle, Red Ridge 1, per doz. 4 40

" 2, " 4 85

Barrel, Underhill 5 00

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½

" 5-in., " 0 06½

" 6-in., " 0 06

" 8-in., " 0 05½

" 10-in., " 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. 4 50

12 in. up 3 25

Spring, No. 20, per gro. pairs 10 50

Spring, Woodyatt pattern, per gro., No. 5, \$17.50; No. 10, \$18; No. 20, \$10.80; No. 120, \$20; No. 51, \$10; No. 50, \$27.50.

MURS.

Garden, Mortar, etc., discount 60 per cent.

Planter per doz. 4 00 4 50

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOKS.

Cast Iron.

Bird cage per doz. 0 50 1 10

Clothes line, No. 61... " 0 00 0 70

Harness " 0 60 12 00

Hat and coat per gro. 1 10 10 00

Chandelier per doz. 0 50 1 00

Wrought Iron.

Wrought hooks and staples Canadian discount 60 per cent.

Wire.

Hat and coat, discount 60 per cent.

Belt per 1,000 0 60

Screw, bright, discount 60 per cent.

"C" brand, 40, 10 and 7½ per cent. off list { Oval head

"M" brand, 55, per cent.

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless" 50 per cent. dis.

HORSESHOES.

F.O.B. Montreal No. 2 No. 1 and larger, smaller.

Iron Shoes.

Light, medium and heavy 3 65 3 90

Snowshoes 3 90 4 15

Steel Shoes.

XL, sizes 1 to 5 5 35

Light, No. 2 and larger 3 80

Bronze, Berlin 4 05

No. 1 and smaller 4 05

Featherweight, all sizes 0 to 4 5 35

Toeweight, all sizes 1 to 4 6 60

JAPANNED WARE.

Discount 50 per cent.

ICE PICKS.

Star per doz. 3 00 3 25

KETTLES.

Brass spun 7½ per cent. discount off new list.

Copper per lb. 0 30 0 50

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American per gross 0 60

KNOBS.

Door, japanned and N.P., per

doz. 1 50 2 50

doz. 2 75 3 25

Bronze, Genuine 6 00 9 00

Shutter, porcelain, F. & L.

screw per gross 1 30 2 00

White door knobs per doz. 2 00

HAY KNIVES.

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANTERNS.

Cold Blast per doz. 7 00

No. 3, "Wright's" 8 50

Ordinary, with O burner. 6 00

Dashboard, cold blast. 9 00

No. 0 5 75

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain lined per doz. 2 20 5 60

Galvanized 1 87 3 85

King, wood 2 75 2 90

King, glass 4 00 4 50

All glass 0 50 0 90

LINE.

Fish per gross 1 05 2 50

Chalk 1 90 7 40

LAWN MOWERS FOR 1905.

Woodyatt, 10½-in., 14-in. cut \$ 50 to \$11 00

Star, 9-in. 6 00 to 6 50

King, 9-in. 5 25 to 5 75

Daisy, 8-in. 6 00 to 7 50

Philadelphia, 10½-in., ball bearing 13 25 to 18 00

Woodyatt, 10½-in. 1 75 to 2 00

Grass Boxes 9 00 to 10 00

King Edw'd, 12-in., 14-in. cut 9 00 to 10 00

Horse Lawn Mowers, "Special."

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel 7 50 10 00

9-in. 5 50 6 25

8-in. 4 90 5 50

Discount 50 per cent.

LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin per doz.

Cabinet.

Eagle, discount 30 per cent.

Padlocks.

English and Am. per doz. 0 50 6 00

Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

MALLETS.

Tinsmiths' per doz. 1 25 1 50

Carpenters', hickory, " 1 25 3 75

Lignum Vitae 3 85 5 00

Caulking, each 0 60 2 00

MATTOCKS.

Canadian per doz. 5 50 6 00

MEAT CUTTERS.

American, discount 3½ per cent.

German, 15 per cen

Gem each 1 15

MILK CAN TRIMMINGS.

Discount 25 per cent.

NAILS.

Cut. Wire.

2d and 3d 3 30 3 45

 3d 2 95 3 15 || 4 and 5d 2 70 2 85 |
| 6 and 7d 2 60 2 80 |
| 8 and 9d 2 45 2 60 |
| 10 and 12d 2 40 2 55 |
| 16 and 20d 2 35 2 50 |
| 30, 40, 50 and 60d (base) 2 30 2 45 |
| Cut nails in carlots 5c. less. |
| Wire nails in carlots are \$2.40. |
| Steel cut nails 10c. extra. |
| Miscellaneous wire nails, discount 15 per cent. |
| Coopers' nails, discount 30 per cent. |

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THE SIMPLEST, CHEAPEST AND BEST.

First cost the only one, no carbon paper or old-fashioned letter press books to buy, produces an exact copy of letters including any changes, signature, etc. Used by the largest commercial houses in Canada, and giving satisfaction to them all. Get one and save time and money. Full line of Office Furniture and Labor-saving devices in stock.

THE OFFICE SPECIALTY MFG. CO. Limited

Factories—Newmarket.

New City Premises—97-103 Wellington St. W.

55 Yonge Street, TORONTO

PLANE IRONS.

English per doz. 2 00 5 00

PLIERS AND NIPPERS.

Button's genuine, per doz. pairs, discount 37½ to 40 per cent.
 Button's imitation per doz. 5 00 9 00
 German 0 60 0 60

PRESSED SPIKES.

Discount 20 per cent.

PULLEYS.

Hothouse per doz. 0 55 1 00
 Axle 0 22 0 33
 Sorew 0 27 1 00
 Awning 0 35 2 50

PUMPS.

Canadian cistern 1 80 3 60
 Canadian pitcher spout 1 40 2 10

PUNCHES.

Saddler's per doz. 1 00 1 85
 Conductors' 3 00 15 00
 Finners, solid per set 0 72
 " hollow per inch 1 00

RAKES.

Wood per doz. net 1 20 up

RAZORS.

Elliot's 4 00 18 00
 Geo. Butler's & Co.'s 4 00 18 00
 Boker's 7 50 11 00
 " King Cutter 12 50 15 00
 Wade & Butcher's 3 60 12 00
 Heile & Quack's 7 00 12 00
 Carbo Magnetic 10 00 15 00
 Griffon Barber's Favorite 10 75
 Griffon No. 65 13 00
 Griffon Safety Razors 13 50
 Griffon Stropping Machines 23 50
 Lewis Bros. "Klean Cutter" 8 50 10 50
 Clauss, 50 and 10 per cent.

REGISTERS.

Discount 40 per cent.

RIVETS AND BURNS.

Iron Rivets, black and tinned, 60 and 10 p.c.
 Iron Burns, discount 55 per cent.
 Extras on Iron Rivets in 1-lb. cartons, 10 p.c.
 Extras on Iron Rivets in 1-lb. cartons, 10 p.c.
 Copper Rivets, with usual proportion burns, 45 per cent. Cartons, 10 p.c. extra, net.
 Copper Burns only, discount 30 and 10 per cent.
 Extras on Tinned or Coppered Rivets, 1-lb. cartons, 10 p.c. per lb.

RIVET SETS.

Canadian, discount 35 to 37½ per cent.

ROPE, ETC.

Sisal 0 11½
 Pure Manila 0 14½
 "British" Manila 0 12
 Cotton, 3-16 inch and larger 0 20½
 " 5-32 inch 0 25
 " 1 inch 0 25
 Russia Deep Sea 0 16
 Jute 0 09
 Lath Yarn, single 0 10
 " double 0 10½
 Sisal bed cord, 48 feet per doz. 0 85
 " 60 feet 0 60
 " 72 feet 0 95

RULES.

Boxwood, discount 55 per cent.
 Ivory, discount 37½ to 40 per cent.

SAD IRONS.

Mrs. Potts, No. 55, polished per set 0 80
 " No. 50, nickel-plated, " 0 90
 Common, plain, nickel-plated, " 4 50
 " plated 5 50

SAND AND EMERY PAPER.

B. & A. sand, discount, 40 and 5 per cent.
 Emery, discount 40 per cent.
 Buret (Buret's) 5 to 10 per cent. advance on list.

SAP SPOUTS.

Bronzed iron with hooks per 1,000 7 50
 "Eureka" tinned steel, hooks " 8 00

SAWS.

Hand, Diaston's, discount 12½ per cent.
 S. & D., discount 40 per cent.
 Crosscut, Diaston's per foot 0 35 0 55
 S. & D., discount 35 per cent. on Nos. 2 and 3.
 Hack, complete each 0 75 2 75
 " frame only each 0 50 1 25

SASH WEIGHTS.

Sectional per 100 lb. 2 00 2 25
 Solid 1 50 1 75

SASH CORD.

Per lb. 0 28 0 30

SAW SETS.

per doz.

Lincoln and Whiting 4 75

Hand Sets, Perfect 4 00

X-Cut Sets, 7 50

SCALES.

Gurney Standard, 40 per cent.
 Gurney Champion, 50 per cent.
 Burrow, Stewart & Milne—
 Imperial Standard, discount 40 per cent.
 Weigh Beams, discount 35 per cent.
 Champion Scales, discount 50 per cent.
 Fairbanks standard, discount 35 per cent.
 " Dominion, discount 55 per cent.
 " Richelieu, discount 55 per cent.
 Warren's new Standard, discount 40 per cent.
 " Champion, discount 50 per cent.
 " Weighbeams, discount 35 per cent.

SCREW DRIVERS.

Sargent's per doz. 0 65 1 00

SCREEN DOORS.

Common doors, 2 or 3 panel, walnut stained, 4-in. style per doz. 6 50
 Common doors, 2 or 3 panel, yellow and green stained, 4-in. style per doz. 6 75
 Common doors, 2 or 3 panel, in natural colors, oil finish per doz. 8 75
 3-in. style 20c. per dozen leas.

SCREWS.

Wood, F. H., bright and steel, discount 87½ per cent.
 Wood, R. H., bright, dis. 82½ per cent.
 " F. H., brass, dis. 80 per cent.
 " R. H., " dis. 75 per cent.
 " F. H., bronze, dis. 75 per cent.
 " R. H., " dis. 70 per cent.
 Drive Screws, dis. 87½ per cent.
 Bench, wood per doz. 3 25 4 00
 " iron 4 25 5 00
 Set, case hardened, dis. 60 per cent.
 Square Cap, dis. 50 and 5 per cent.
 Hexagon Cap, dis. 45 per cent.

SCYTHES.

Per doz. net 6 00 9 00

SCYTHE SNATHS.

Canadian, discount 40 per cent.

SHEARS.

Clauss, nickel, discount 80 per cent.
 Clauss, Japan, discount 67½ per cent.
 Clauss, tailors, discount 40 per cent.
 Seymour's, discount 50 and 10 per cent.

SHOVELS AND SPADES.

Canadian, discount 45 per cent.

SINKS.

Cast iron, 16 x 24 0 85
 " 18 x 30 1 00
 " 18 x 36 1 40

SNAPS.

Harness, German, discount 25 per cent.

Lock, Andrews' 4 50 11 50

SOLDERING IRONS.

1, 1½-lb. per lb. 0 37

2-lb. or over 0 34

SQUARES.

Iron, No. 493 per doz. 2 40 2 55

" No. 494 3 25 3 40

Steel, discount 60 to 80 and 5 per cent.

Try and Bavel, discount 50 to 52½ per cent.

STAMPED WARE.

Plain, discount 75 and 12½ per cent. off revised list.

Retained, discount 75 per cent. off revised list.

STAPLES.

Galvanized 3 00
 Plain 2 80
 Coopers, discount 45 per cent.
 Poultry netting staples, discount 40 per cent.
 American discount 25 per cent.

STOCKS AND DIES.

STONE.
 Washita per lb. 0 28 0 60
 Hindostan 0 06 0 07
 " slip 0 09 0 09
 Labrador 0 13 0 13
 " Axe 0 15 0 15
 Turkey 0 50 0 50
 Arkansas 1 50 1 50
 Water-of-Ayr 0 10 0 10
 Scythe per gross 3 50 5 00
 Grind, 2-in., 40 to 200 lb., per ton 25 00
 " under 40 lb., 28 00
 " under 2 in. thick, 29 00

STOVEPIPES.

5 and 6 inch, per 100 lengths 7 00

7 inch 7 50

ENAMELINE STOVE POLISH.

No. 4, 3 doz. in case, net cash 4 80

No. 5, 3 doz. in case 8 40

TACKS, BRADS, ETC.

Carpet tacks, blued 80 and 15
 " " tinned 80 and 20
 " " (in kegs) 40
 Cut tacks, blued, in dozens only 80
 " ½ weights 60
 Swedes cut tacks, blued and tinned—
 In bulk 80 and 10
 In dozens 75
 Swedes, upholsterers', bulk 85, 12½ and 12½
 brush, blued and tinned 70
 Swedes, gimps, blued, tinned and japanned 75 and 12½
 Zinc tacks 35
 Leather carpet tacks 55
 Copper tacks 50
 Copper nails 52½
 Trunk nails, black 65 and 5
 Trunk nails, tinned 65 and 10
 Clout nails, blued 65 and 5
 Chair nails 35
 Patent brads 40
 Fine finishing 40
 Lining tacks, in papers 10
 " " in bulk 15
 " " solid heads, in bulk 75
 Saddle nails, in papers 10
 " in bulk 15
 Tufting buttons, 22 line, in dozens only 60
 Zinc glaziers' points 5
 Double pointed tacks, papers 90 and 10
 " bulk 40
 Clinch and duck rivets 45

TAPE LINES.

English, ass skin per doz. 2 75 5 00
 English, Patent Leather 5 50 9 75
 Chesterman's each 0 90 2 85
 " steel each 0 80 8 00

TINNERS' SNIPS.

Per doz. 3 00 15 00

Clauss, discount 35 per cent.

THERMOMETERS.

Tin case and dairy, 75 to 75 and 10 per cent.

Game, Newhouse, discount 25 per cent.

Game, H. & N., P. S. & W., 65 per cent.

Game, steel, 72½, 75 per cent.

TROWELS.

Diaston's, discount 10 per cent.

German per doz. 4 75 6 00

S. & D., discount 35 per cent.

TWINES.

Bag, Russian per lb. 0 27

Wrapping, cotton, 3-ply 0 24

" 4-ply 0 27

Mattress per lb. 0 33 0 45

Staging 0 27 0 35

VISES.

Wright's 0 13½

Brook's 0 12½

Pipe Vise, Hinge, No. 1 3 50

" No. 2 5 50

Saw Vise 9 00

COLUMBIA HARDWARE CO.

Blacksmiths' (discount) 60 per cent.

Parallel (discount) 45 per cent.

ENAMELLED WARE.

White, Princess, Turquoise, Blue and White discount 50 per cent.
 Diamond, Famous, Premier, discount 50 and 10 per cent.
 Granite or Pearl, Imperial, Crescent, discount 50, 10 and 10 per cent.
 Premier steel ware, 40 per cent.
 "Star" decorated steel and decorated white, 25 per cent.

WIRE.

Smooth Steel Wire.

No. 0-9 gauge \$2 50
 10 " 60 extra.
 11 " 12½ "
 12 " 20c "
 13 " 30c "
 14 " 40c "
 15 " 55c "
 16 " 70c "

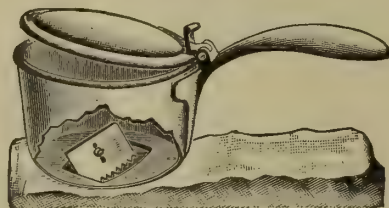
Add 60c. for coppering and \$2 for tinning.
 Extra net per 100 lb.—Oiled wire 10c., spring wire \$1.25, special hay baling wire 30c., best steel wire 75c., bright soft drawn 15c., charcoal (extra quality) \$1.25, packed in casks or cases 15c., bagging and packing 10c., 50 and 100-lb. bundles 10c., in 25-lb. bundles 15c., in 5 and 10-lb. bundles 25c., in 1-lb. hanks, 50c., in 1-lb. hanks 75c., in 1-lb. hanks \$1.

Fine Steel Wire, discount 25 per cent.
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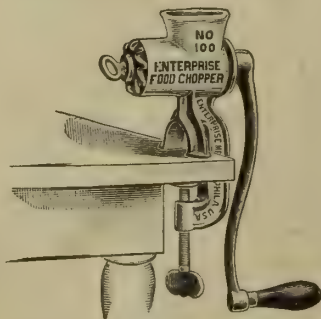
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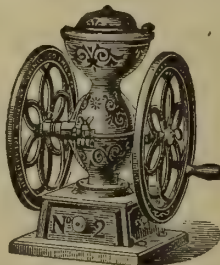
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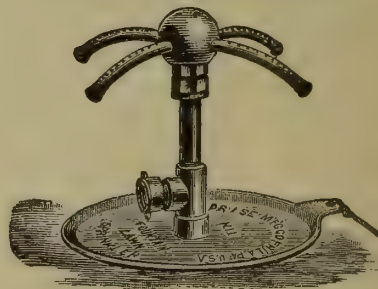
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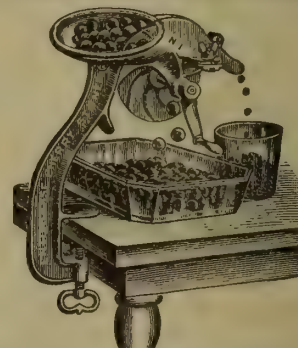
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Colonial Stock Food Co., Toronto.
 International Stock Food Co., Toronto.

Store Lighting.

Auer Light Co., Montreal.
 Grose, Walter, Montreal.
 International Gas Appliance Co., Toronto
 St. Thomas Acetylene Mfg. Co., St. Thomas, Ont.

Stoves and Tinware, Radiators, Furnaces, etc.

Adams Co., Dubuque, Iowa.
 Batty Stove & Hardware Co., Toronto.
 Canadian Heating & Ventilating Co., Owen Sound.
 Davidson, Thos., Mfg. Co., Montreal.
 Fairgrieve Mfg. Co., Toronto.
 Guelph Foundry Co., Guelph.
 Gurney Foundry Co., Toronto.
 Kemp Mfg. Co., Toronto.
 Ives, H. R., Co., Montreal.
 McClary Mfg. Co., London.
 Merrick, Anderson & Co., Winnipeg.
 Sterne, G. F., & Son, Brantford, Ont.
 Stewart James Mfg. Co., Woodstock.
 Telephone City Stoves, Brantford.
 Western Foundry Co., Wingham.
 Wright, E. T., & Co., Hamilton.

Toasters.

Fairgrieve Mfg. Co., Toronto.

Traps.

Mast, J. M., Mfg. Co., Lititz, Pa.

Vises.

Lamplough, F. W., & Co., Montreal.

Wall Paper.

Stanton's Limited, Toronto.

Warehouse Trucks.

Fairbanks Co., Montreal.

Slingsby, H. C., Montreal.

Washing Machines, etc.

Connor, J. H., & Son, Ottawa.

Taylor-Forbes Co., Guelph, Ont.

Wholesale Hardware.

Birkett, Thos., & Sons Co., Ottawa.
 Bowman, John, Hardware & Coal Co., London, Ont.
 Canada Hardware Co., Montreal.
 Howland, H. S., Sons & Co., Toronto.
 Lewis Bros. & Co., Montreal.
 Lewis, Rice, & Son, Toronto.
 Merrick, Anderson & Co., Winnipeg.

Wire, Wire Rope, Cow Ties.**Fencing Tools, etc.**

Canadian Steel Wire Fence Co., Hamilton
 American Steel and Wire Co., New York, Montreal, Chicago.
 Dennis Wire and Iron Co., London, Ont.
 Dominion Wire Mfg. Co., Montreal and Toronto.
 Greening, B., Wire Co., Hamilton.
 Ironside, Son & Co., London, Eng.
 McGregor—Banwell Fence Co., Windsor, Ont.
 Merrick, Anderson & Co., Winnipeg.
 Oneida Community, Niagara Falls.
 Ontario Wire Fencing Co., Picton, Ont.
 Owen Sound Wire Fence Co., Owen Sound
 Page Wire Fence Co., Walkerville, Ont.
 Walter, E. F. & Co., Montreal.
 Western Wire & Nail Works, London, Ont.

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Taylor-Forbes Co., Guelph, Ont.
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Oakey's The original and only Genuine Preparation for Cleaning Cutlery. 6d. and 1s. Canisters

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JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and Flint Cloths and Papers, etc.

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Agent:

JOHN FORMAN, 644 Craig Street MONTREAL.



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Auto Screw Jack

Harness Snaps, Chain, Rope and Web Goods, etc.

FOR SALE BY JOBBERS AT MFRS. PRICE



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Largest Variety, Toilet, Hand, Electric Power ARE THE BEST. Highest Quality Grooming and Sheep-Shearing Machines. WE MAKE THEM.

SEND FOR CATALOGUE TO American Shearer Mfg. Co., Nashua, N.H., USA

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Promptly, too.

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Manilla Paper **Fibre Paper**

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SAMPLES AND PRICES GLADLY SENT.

CANADA PAPER CO.

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This design a guarantee of quality.





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STRONGEST TRAPS MADE. PRICES EXACTLY RIGHT.

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OUR SPECIALTIES ARE **IRON, STEEL, METALS, BARS, PLATES, SHEETS, BOLTS and NUTS, TIN PLATES, Etc.**

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IRONSIDE'S PATENT WIRE CUTTERS, guaranteed to cut any wire

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IRONSIDE, SON & CO., 16 Water Lane Gt. Tower St., E.C. **LONDON, ENG.**

CHAS. F. CLARK, President. **CHAS. L. BECKWITH, Secretary.**

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The People Want

WALKER'S SELF-PULLING

which draws the cork, cuts the wire, removes crown, seal and aluminum stopper. Does the whole thing. Each one tested and guaranteed. We manufacture over 50 different styles.

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Bars in Flats, Rounds, Squares,
Ovals, Half-Ovals, Half-Rounds and
Bands. Also Wrought Washers.
GOOD QUALITY. PROMPT SHIPMENT.

London Rolling Mill Co.
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MEASURING TAPES

Steel, Metallic, Linen, Pocket, Ass Skin,
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ARE THE BEST AND MOST POPULAR TAPES IN THE WORLD.
YOUR STOCK IS NOT COMPLETE WITHOUT THEM.

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For sale by ALL PROMINENT CANADIAN HARDWARE JOBBERS.

Price is a good Salesman—but

Quality is a better one.



We employ both judiciously. In other words -- we study the trade's interests and requirements.

There are cheap goods, and there are goods that *are cheap*.

"HURON" STOVES, RANGES AND FURNACES

are always cheap—*quality considered*.

Write for the Agency to-day.

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Est. 1869.  Inc. 1895.

Black Diamond File Works
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 PHILADELPHIA
 Twelve  Medals

Awarded
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The Fisk Detachable Motor Tire.

The most efficient, satisfactory and durable Motor Tire yet manufactured. The Fisk Tire is mechanically attached and has none of the weaknesses of the automobile tire which is held to the rim by air pressure. There is absolutely no creep or roll to the Fisk Motor Tire and it cannot come off the wheel.

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This trade mark signifies the highest standard of reliability. When in need of Galvanized Sheets for construction work don't be satisfied with substitutes. Insist on the genuine.

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**Experience
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We didn't learn to make the best belting in a week or a year. When you buy our brands you get the benefit of years of experience.

Montreal, Toronto.

HARDWARE AND METAL

AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, OCTOBER 1, 1904.

NO. 40

BUTCHERS' KNIVES
JOHN WILSONS
CELEBRATED
"PEPPERCORN AND DIAMOND"
BRAND CUTLERY.
TRADE MARK
BUTCHERS' STEELS

Canadian Agents: DORKEN BROS. & CO., Montreal

THE STANDARD OF THE WORLD.



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Its quality has made it so.

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Sleeve Iron?

There is the country over a heavy sale for
this useful and sensible hardware specialty.

Women prize it for . .

**SLEEVES, BLOUSES,
FRINGES, WHITEWEAR.**

We make two styles—one solid, and one
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Nickel-Plated with a superior grade of
Nickel, and double plated.



To use with Mrs.
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Made and sold only by us. Order from your jobber.

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Montreal Branch :
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The Largest Manufacturers of Hardware in Canada.

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LUMBERMEN'S AND CONTRACTORS' SUPPLIES

Hardware men can have all orders for Railway and Contractors' Supplies filled promptly. We have a large stock of Tools and Shovels always ready for immediate shipment and can guarantee satisfaction in the quality of our goods.

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Get our price of

CROSS-CUT
CIRCULAR
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A FULL STOCK OF

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OF ALL KINDS

CHOPPING
DOUBLE BITTED
BENCH

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—of all sizes in
Proof and Crane quality. Get our new
prices on boom and log chains.

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FILES

We carry a full stock of
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Jowitt, Black Diamond, Globe, Nichol-
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Write for prices.

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A doctor who makes
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GILLETT'S LYE

Hardware dealers,
read the uses of Gil-
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per. It will help you
to sell more lye—that
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E. W. GILLETT COMPANY LIMITED
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The Canadian Rubber Co. of Montreal.

MANUFACTURERS OF

**Rubber Belting,
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Valves, Gaskets,**
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We make a specialty of

HORSE SHOE PADS

the best in the market.

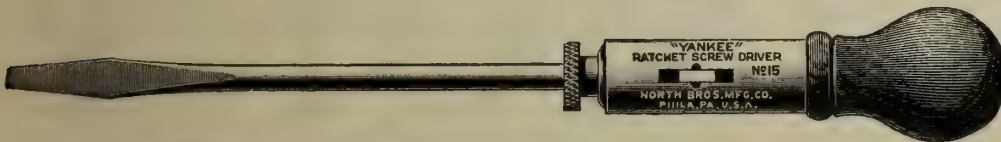
Write for Prices and Circulars.

Head Office : : MONTREAL

BRANCHES—TORONTO, WINNIPEG and VANCOUVER

Other Tools are very
good Tools, but

“YANKEE TOOLS” ARE BETTER



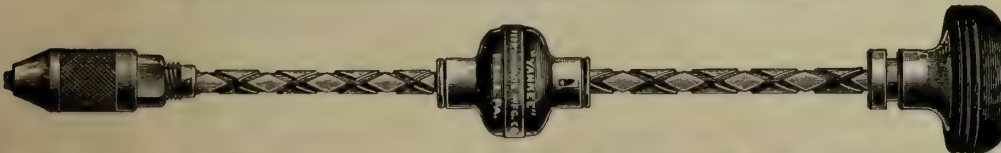
No. 15. “Yankee” Ratchet Screw Driver, with Finger Turn on Blade.



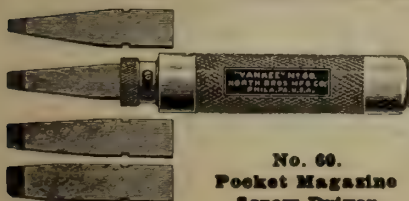
No. 30. “Yankee” Spiral-Ratchet Screw Driver, Right and Left Hand.



No. 41. “Yankee” Automatic Drill, Eight Drill Points in Handle.



No. 0. “Yankee” Reciprocating Drill for Iron, Steel, Brass, Wood, etc.



No. 60.
Pocket Magazine
Screw Driver.

Our “YANKEE” Tool Book
tells all about them. Mailed
free on application.

Manufacturers also of

**LIGHTNING,
GEM and
BLIZZARD
Ice Cream Freezers.**

**Toy Freezers,
Ice Shaves and
Ice Chippers.**

**Plating Machines,
Hand Platers.**

Sold by Leading Jobbers
in Canada.

NORTH BROS. MFG. CO.,

Philadelphia, Pa., U.S.A.

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LIMITED

Wholesale Hardware Merchants

OTTAWA, ONT.

Seasonable Goods such
as....

Axes, Cross-Cut Saws,
Horse Blankets, Sleigh
Bells, Game Traps, Cut-
lery in Cases, etc. . . .

GET OUR PRICES BEFORE ORDERING.

P.S —Bread Makers in 2 sizes for 4 and 8 Loaves.

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FOOD CUTTERS



EASY TO CLEAN

It is easy to open the case of the Russwin Food Cutter, rinse it, wipe it, and thoroughly remove every particle of food. Cutter below case conveys juices to dish and prevents their dripping. Try it. For sale everywhere. Made by

RUSSELL & ERWIN MFG. CO.
NEW BRITAIN, CONN.

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The KENNEDY HARDWARE CO , Limited

49 Colborne St., TORONTO, ONT.

ANTIMONY

Cookson's "STAR" Brand.

WRITE FOR PRICES.

M. & L. Samuel, Benjamin & Co.

503 Temple Building - TORONTO.

English House—16 Philpot Lane, LONDON, ENGLAND.

Exactly what we've been telling you.

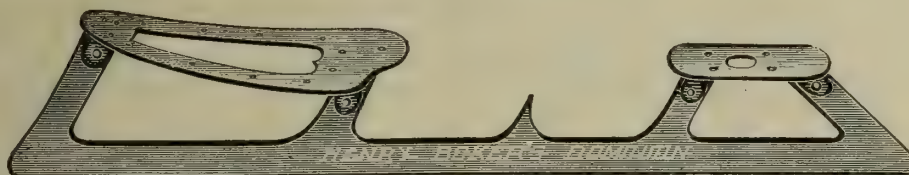
A retailer cannot hope to see all the goods of the firms he buys from in their advertisements in the trade papers.

A catalogue * * * will probably contain something that is new to the reader, the knowledge of which will probably come in useful at some future time.

HARDWARE AND METAL, SEPT. 10-04

Those who have our Sporting Goods Catalogue will recognize this truth when they come to place their order for skates. And to those who have not received this book we wish once more to make the offer of MAILING IT FREE UPON REQUEST.

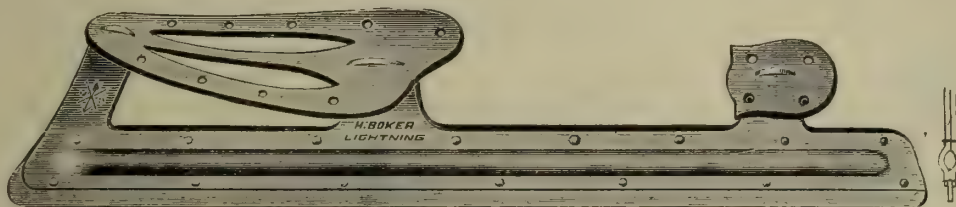
It will cost you the price of a postal card.



No. 692, Dominion. Welded and tempered, plated top plates, riveted brackets, full nickel plated blades with puck stop, sizes 10 to 12 inches.

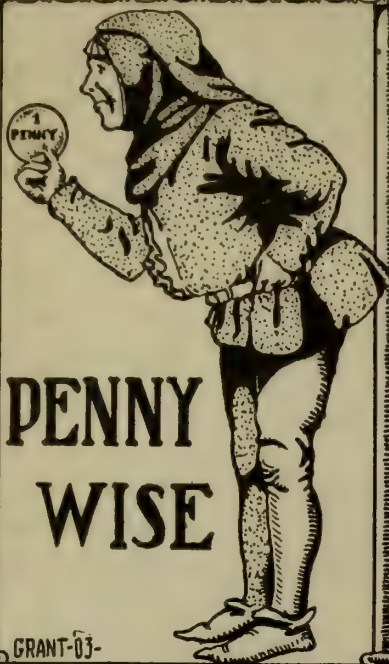


No. 4597, Stadacona. Welded and tempered, plated top plates, riveted brackets, full nickel plated blades. Strong and very finely finished, sizes 10½ to 11½ inches.



No. 9537, Lightning. Crucible steel runners, highly tempered, re-enforced by corrugated steel plates which form the blade. Full nickel plated and buffed blades and top plates, sizes 10½ to 11½ inches.

Lewis Bros. & Co.
 Importers and Distributors
 M o n t r e a l



**PENNY
WISE**

GRANT-03-

The only real value of money lies in making use of it.

The money that lies there in your safe from day to day doesn't do you any good until you commence to use it.

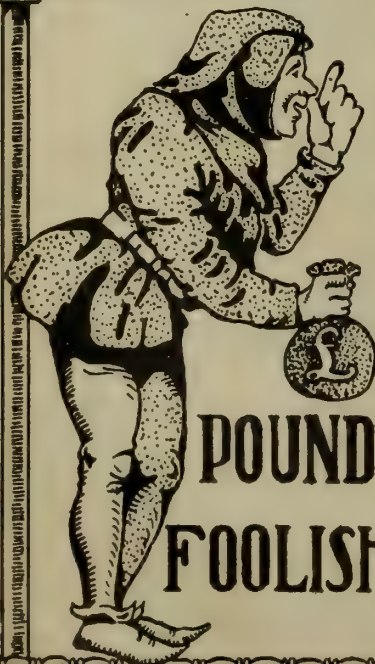
Then its value to you depends on how you use it.

Now, if you would only invest some of it in advertising space in **HARDWARE AND METAL**, and then use the space right you'd have a valuable assistant, working to increase your trade with hardwaremen and to make yourself and your goods better known among them.

Some folks would sooner save (?) the money—but they are "penny wise and pound foolish."

But you're not.

Are you?



**POUND
FOOLISH**

If you are a Cap and Set Screw Jobber, we are prepared to give you right terms and protect you against any condition, such as the Cap and Set "war" producing. We are not looking for Canadian trade for this season only, and have no need to dump our surplus Products to maintain our prices in England. We sell in England as cheaply as in Canada.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

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Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

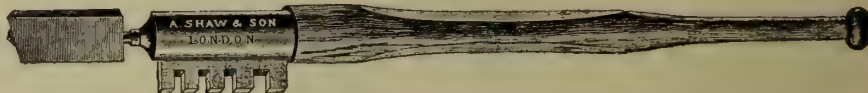
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ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.,



Agents for Canada: **A. Ramsay & Son, Montreal**

GLAZIERS' DIAMONDS



Ahead of all others in quality and workmanship. If sparks of fine quality, set by experts, are what you require, buy Diamonds of A. Shaw & Son's make.

Canadian Agent

GODFREY S. PELTON

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I. A. TOBIAS,
Canadian Agent.

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Clauss Brand

Double Swedged Blade

Pocket Scissors.

FULLY WARRANTED

Hand forged from finest steel. Welded on our Composition Metal. Hardened in water. Tempered by Natural Gas. Full Crocus Finish and Finely Nickel Plated.

CELEBRATED

HEINISCH SHEARS

Tailors' Shears,
Trimmers' Shears,
Tinnners' Snips, etc.



ACKNOWLEDGED THE BEST.

R. HEINISCH'S SONS CO.

NEW YORK OFFICE, 155 Chambers St.
NEWARK, N.J., U.S.A.

HENRY T.
SEYMOUR
SHEAR CO.
NEW YORK.

SEYMOUR SHEARS

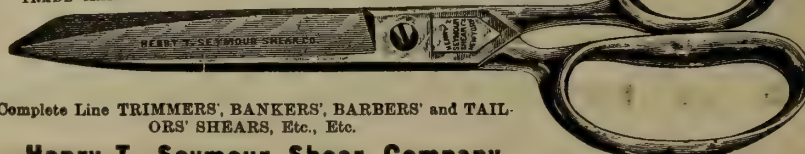
HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.

HENRY T.
SEYMOUR
SHEAR CO.
NEW YORK.

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Latest Catalogue will be sent in exchange for your business card.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the
NIAGARA WIRE LINK
OPEN RING TYPE.

Also made in **CLOSED RING, THREE CHAIN**
and **DOMINION (or "Short")** TYPES.

Oneida Community Cow Ties can be had of all the leading jobbers. We invite correspondence where any difficulty is experienced in obtaining our goods.

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

When you see the word

GURNEY

You invariably think of

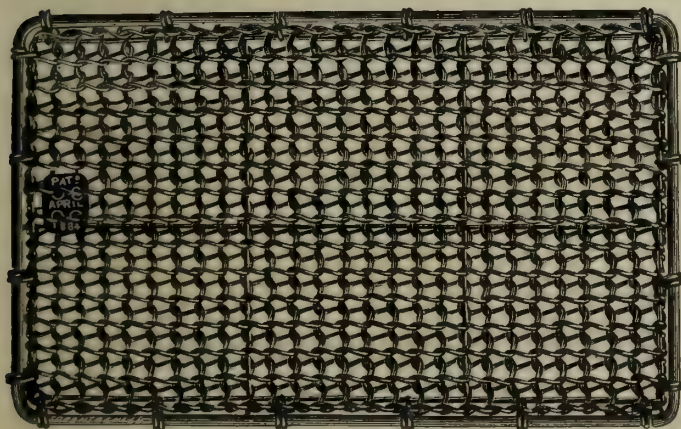
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We make scales of every description—from the sensitive postal scale up to the giant coal scales. The same quality of exactness in them all.

When interested in scales, write us. Send for our Catalogue in the meantime.

The Gurney Scale Co., Hamilton, Ont.
Eastern Warehouse: The Gurney-Massey Co., Limited Montreal, Que.
Western Warehouse: The Gurney Stove and Range Co. Limited, Winnipeg, Man.

Wire Door Mats



The most durable, cleanest and perfect sanitary Mat made.

Has been on the market for 20 years.

All sizes and shapes made to order.

For stock sizes see catalogue.

THE B. GREENING WIRE CO.,
LIMITED
Hamilton, Ont. Montreal, Que

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.**

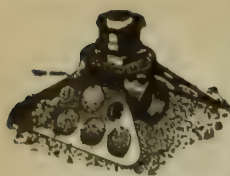
WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.
LIMITED
MONTREAL and TORONTO



"Pullman"
Lawn Sprinkler
IS YOUR
ORDER IN ?
Send for Folder No.14.
PULLMAN MFG. CO
Rochester, N.Y., U.S.A.

ONTARIO SILVER CO.,

Limited,
NIAGARA FALLS, CANADA.
Manufacturers of **FLATWARE, CUTLERY and
ELECTRO PLATE.**
Ask for our Catalogue and Quotations.



Dundas Axe Works
DUNDAS, CANADA.

Write for Prices

P. BERTRAM, - Manager.

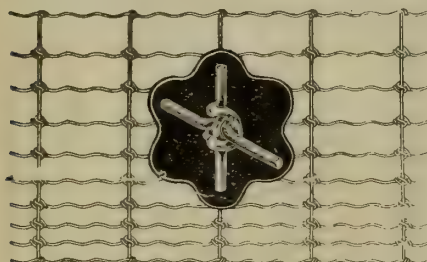
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For Your Business.

Use Rubber Type.

We sell suitable fonts. Write for catalogue.

THE SUPERIOR MFG. CO.
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IDEAL FENCING

Is Strong and Durable, because Large Gauge (No. 9) Steel Galvanized Wire is used throughout. SEE OUR EXHIBIT AT PRINCIPAL FAIRS, or write for Catalog.

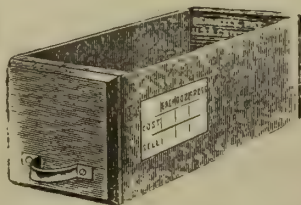
Write for Catalogue.

The McGregor-Banwell Fence Co., Limited,
WALKERVILLE, ONT.

Merrick, Anderson & Co., Winnipeg, Man.
Sole agents for Man. and N.W.T.

IF YOU INTEND MAKING ALTERATIONS WRITE
US FOR PRICES AND PARTICULARS
OF OUR

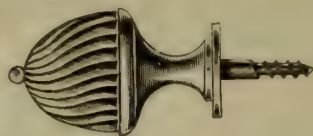
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Shelf
Box.



We can make boxes to fit your present shelving
...THE...

Bennett Manufacturing Co.
PICKERING, ONT.

WINDOW AND CURTAIN FIXTURES



Our line comprises all requisites, Pins, Hooks, Rings, Pole Ends, Brackets and Sockets. We would like an opportunity of quoting you on these goods. Keep us in mind and when you want regular or special lines, let us know.

JONES & BARCLAY, Bath Row, BIRMINGHAM, ENG.

Genuine Pratts Astral Lamp Oil

Sold in all countries and recognized as the highest grade oil manufactured.

WHOLESALE ONLY

THE QUEEN CITY OIL COMPANY, Limited, - TORONTO, ONT

DAVISON'S MINIATURE TOOLS.

A perfect working model wrench, exact size of cut.
Accurately proportioned and made exactly to scale.
Handsomely nickle-plated. Sells on sight.
\$2.00 per doz. Pearl Hand e, \$3 00 doz.



DAVISON MFG. CO., 112 Front St., Brooklyn, N.Y.

SPECIAL DROP FORGED SPRINGS

THE WALLACE BARNES CO.,
BRISTOL, CONN.

DILLON-HINGE-STAY

Why handle Barb and Coiled Wire at no profit when
you can have a fair margin on our

Dillon Fencing



Got up specially
for the hardware
trade.

Easily put up
and at the most mod-
erate prices.

Write for prices in car or small lots.

CAVERHILL, LEARMONT & CO.,
Montreal and Winnipeg
Eastern and Western Agents

OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.

Cordage

Of every description.

Net Mountings,

Sand Line,

Unoiled Cordage,

Marline,

Extra Long Lengths,

Ratline,

Shingle Yarn.

Core Rope,

Oil Well Cables,

Russian Packing,

Deep Sea Lines,

Ancor Line,

Good Transmission Rope,

Engine Packing.

Clothes Lines,

Only Best Material Used.

Log Line

Twine.

Dangerous to use Inferior Cordage.

Mail

Orders

Now

To us and

Recieve

Exceptional

Attention.

Low-priced goods are not always
the cheapest.

TRUE BRAND CUTLERY



POCKET CUTLERY, RAZORS, SCISSORS,

QUALITY GUARANTEED

BEST GOODS

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., Montreal

PRICE is a good thing,—but,
QUALITY is better.

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.

Kemp's Milk Can Trimmings.

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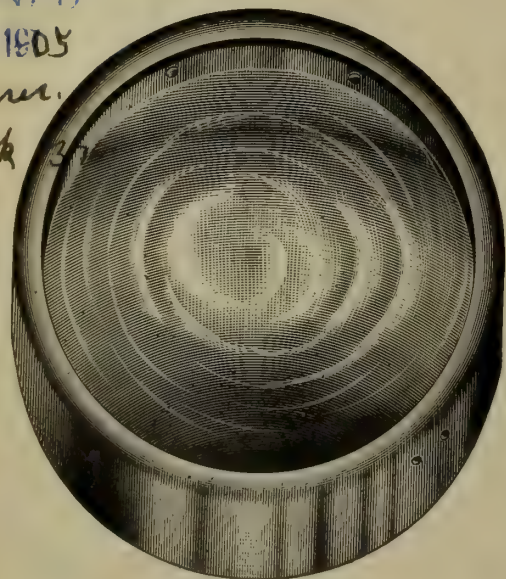
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-Owner.

+ Book 37

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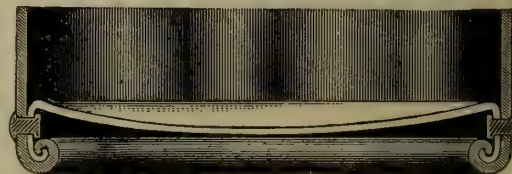


The reason for the steadily increasing demand for these is owing to the fact that

They Possess ALL the Essential.

Features of a PERFECT Trimming.

Strength,
Durability,
and
Completeness
of Finish.



They are so constructed as to be easily put together.

Manufactured in all sizes—10 to 40 gallons.

Narrow top hoops supplied if desired.

We always carry in stock a full line of Tinned Iron of the finest quality, which we are prepared to supply at lowest market prices.

We will be pleased to quote you.

RETURNED
JUL 15 1905

KEMP MANUFACTURING CO., TORONTO, Canada

Making the Hardware Store Attractive

By E. K. Cunningham

WE consider the location an important feature of the hardware business, a corner store being preferable for many reasons. Goods can be loaded and unloaded at the back and side entrances, thus saving litter and trucking through the store on busy days. It affords a better light, also enables one to handle stoves and heavy goods much easier in loading, and keeps the front of the store neat and clean and ever ready for business.

To make the first impression favorable, the store front should present a neat appearance. We keep ours all painted, with a fresh coat of paint each season; the cost is trifling and aids much to make an attractive store. We believe in making our store known to the public. We use for our mascot the owl, having two large bronze colored owls painted on our front windows, under which is printed, "The Owl Store; We Never Sleep." We use this in connection with all our advertising and on our stationery. We also have a small owl sticker in the form of a trade-mark, which we paste on every article in our store, and on every package that goes out, thus keeping our store constantly before the public.

We all laugh at the boy who went to market with a sack of potatoes and did not sell any as he kept them in the sack, and to the only man who asked what he had in the sack, he replied: "None of your business." However, many of us fail to grasp the close relation existing between publicity and success. The goods that are seen are the goods that are bought. A dealer may have the finest goods in the world, but no one will know it if he keeps them in the original packages in the corner of the cellar. People buy what they see, and it should be borne in mind that many people in this country have an imperfect knowledge of our language, and perhaps do not know the English word to describe what they want, and embarrassment in filling their wants is avoided when goods are plainly shown. This then leads up

to the question of show windows, store arrangement and advertising.

CARE OF SHOW WINDOWS.

Window displays are but samples of a well arranged store. It is not every clerk or hardwareman who can fit up an attractive show window. Original ideas are the best in every way. Have in mind just what you want before starting out to make a display. Stepping stones to success lie in the foundation and beginning. So it is in window trimming. "Well begun is half done." There must be method in this as in all things in which there would be success. Displays should be changed every week at least, and when once in running order do not fail to keep them up. Enough time is not generally spent on window displays. Do not give passersby an opportunity to criticize in any way. Spare time cannot be used more advantageously than in trimming up windows and in keeping them attractive. New goods should be put on display as soon as possible. Show them to the public—they are the buyers. Increase in sales is invariably noticed, and many times new customers are gained through attractive show windows. Keep your windows perfectly clean at all times, as no display, however neatly arranged can attract attention unless the window glass is perfectly clean. Make your displays as different as possible from those of your competitors. Work out ideas in window displays of your own. A wide-awake, hustling, up-to-date merchant never allows his window displays to look old and stale, and this also should apply to the stock in general.

IN REGARD TO ADVERTISING.

The daily and weekly newspaper is the best medium through which to reach the public, especially among the farmers, as the farmer of to-day receives his daily and weekly newspaper through the rural routes as regularly as do those of us in the cities and towns. Local advertisements should be worked in unison with the window displays. Many customers are attracted to the store through the medium of local advertisement. People who do not get down town every day are

kept in touch with your new goods and displays through the paper, and, if interested they will come down to see the exhibit before the change is made.

In relation to your business, what are your ads? You are in business to make money. In order to do this you have to buy goods, have to sell goods, and the latter is your chief aim. Your reputation for fairness and square dealing helps you in this, as does also your friendship and position in the community. Your clerks are important associates and add to your success. Your stock and store and the way your goods are displayed aid you. These are some of the ways of selling goods. One can have the finest newspaper ads imaginable, and their effect as business getters may be completely nullified by your poor store keeping, lack of attention on the part of clerks, poor goods, lack of consistency on your part, or any other item of bad management. They used to say "Honesty is the best policy," but that was years ago. Nowadays honesty is the only safe policy to tie to, and a merchant's ad, unless the honest representative of an honest business, had better be unpublished, for it will react with the deadly effect of a boomerang, but an ad that sells well is a good one. Let us examine its character.

I have in mind a man who has been successful in advertising, but whose ads are as ungrammatical as is his every day speech. But they are his ads. If they were written in the King's best English they wouldn't be his ads. So I am of the opinion that if you are in the habit of using such an expression as "We's got 'em at the Owl Store," it is better in your ad than to allow the printer to change it to the unnatural, the more grammatical and elegant expression, "What we lack in quantity we make up in the supreme excellence of our quality." Yes, it's better to be grammatical, but don't send out from the printing office an ad that wouldn't feel at home in your store. The great weakness of men is to write as they never speak. That's poor stuff to put into an ad. Your ad should be your own talk spread

out on paper. Practice writing your ads as you would talk, though ungrammatical they may be; then they will be more a part of yourself, and, in my humble opinion, will better serve the purpose for which they are intended and assist you in selling your goods. Such ads are the only successful ones. If some men talked as they wrote they would soon be sent to the place where the state takes care of people not possessed of all their faculties. The main thing is, then, it's your ad and should represent you.

THE INTERIOR OF THE STORE

The interior of the store should be kept as neat and clean as the show windows. That hardwaremen are noted for their enterprise and intelligence is a fact generally recognized and for this reason it seems strange that so many of them are negligent in matters pertaining to the arrangement and cleanliness of their store rooms. A great many of them who have scrupulously clean, neat and tidy houses, and who would be quick to find fault with the good housewife on account of any breach on her part of the laws of cleanliness and neatness therein, will permit their offices and store rooms in which they probably spend more of their time, to become so untidy and unclean as to cast reflections on the entire craft. The fact is the old proverbs, "Cleanliness is next to Godliness" and "Order is Heaven's first law," are as applicable to the hardwareman as to his fellow merchant in any other line of business. That it is possible to have a hardware store almost, if not quite, as attractive as that of the clothier, dry goods man, or even the jeweler, may be demonstrated by a visit to one of the modern up-to-date stores, such as are becoming quite common in most localities.

Keep show cases clean and neatly arranged, using one for cutlery exclusively, another for nickel ware and silver, and so on, with the goods properly arranged in each. Our shelving we extend from the floor to the ceiling on either side, using traveling ladders. On one side we keep hardware, sporting goods, builders' supplies, tools, etc. On the other side we arrange paints, varnishes, granite and tinware, wooden ware, etc. For hinges, clevises, malleables, nuts and washers we have small cabinets neatly arranged in the rear of the store on our bolt counters. Our wire screen we have on a stand or rack by itself, with room for full rolls underneath. Window glass in a case, with cutting board at the

end. Hoes, rakes, forks, shovels, spades on brackets, with handles in a rack underneath. Hay knives, handled axes, crowbars, log and cattle chains of all kinds we keep in racks. Washing machines, churns, wringers and this class of goods are kept neatly arranged along the side of the bolt counters.

STOVES AND RANGES.

Now, in regard to the arrangement of stoves and ranges, I take great pride in this branch of our business. Our ranges and cooks we keep nearest the shelving. Have them neatly polished and set in a perfectly straight row, ranging in size and price to suit the trade. A customer comes to your store to buy a range. You show him a well assorted line of from 15 to 20 stoves and ranges, ranging in price all the way from \$25 to \$60, and you stand a much better show to make a sale than if you had a few ranges, poorly polished and set in a zigzag manner around the store. We have our heaters displayed in the centre of the store, finely polished, and set up on steel frame castors, with the nickel neatly polished. It is truly said, "A stove well blacked is half sold." We use black silk polish on all our new goods, as it costs but little more and gives a stove a much finer appearance. We arrange our coal stoves in the front and continue down the line with the surface burners, parlor stoves, wood base burners, oaks and air tight, having one sample of each style and size always on the floor in stove season. A great many times you can sell from stock and retain samples on the floor.

We also find the second-hand stove business a very profitable one. We buy and trade second-hand stoves of all kinds. This branch of our business is kept entirely separate, having a room fitted up for the purpose. These goods oftentimes net us more clear money than new goods. A man comes to us in the early Fall to trade stoves. We trade him a new stove, getting our price, and get the old one at a very low figure. This stove is then taken into the second-hand room and the necessary repairs made thereon, after which it is polished and placed on the sale floor, and often times brings a better margin of profit than new goods. We have found this very successful, having sold as high as 100 good second-hand stoves in a single season.

The furnace question is becoming an important feature in connection with the retail hardware business. How many of you to-day are doing your furnace

work right? How many of you are making money on the furnace business? How many are getting satisfactory results? We, having been in the furnace business for a number of years, have learned some of the drawbacks as well as some of the good points in connection with it. Too many hardware merchants to-day are doing their work on a guessing plan. Too much trouble results after the furnace is installed. I think if we all could confine ourselves to figures, measuring every foot of pipe and material that goes into the construction of a furnace job, and estimate more closely on time and labor, be more careful in buying a good furnace, having it set as nearly as possible under the centre of the building, use a larger size of piping and cold air returns than is commonly used, much better results in furnace heating would be attained, and the dealer would reap a better harvest and the customer be more satisfied.

THE CANADA HARDWARE CO.

As was mentioned in last week's issue, the Canada Hardware Co., immediately after their fire, opened temporary offices at their heavy goods warehouse, 43-45 Common street. With characteristic energy, Mr. St. Arnaud and his staff are now working to fill orders with the least possible delay, and are already planning for the future. In the meantime they have decided to clear their stock of heavy goods, and to that end are offering special prices. This stock did not go through the fire, and hence is in first-class condition. It is only fair to the Canada Hardware Co. to say that the references in the papers to gunpowder being in their fire were incorrect, as their stock was stored in the vaults in their Common street (Montreal) warehouse.

The Locomotive & Machine Co., Montreal, have turned out two large engines, the first of the type ever turned out there.

WIRE NAILS TACKS WIRE

Prompt Shipments

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Some Light on Skylights.

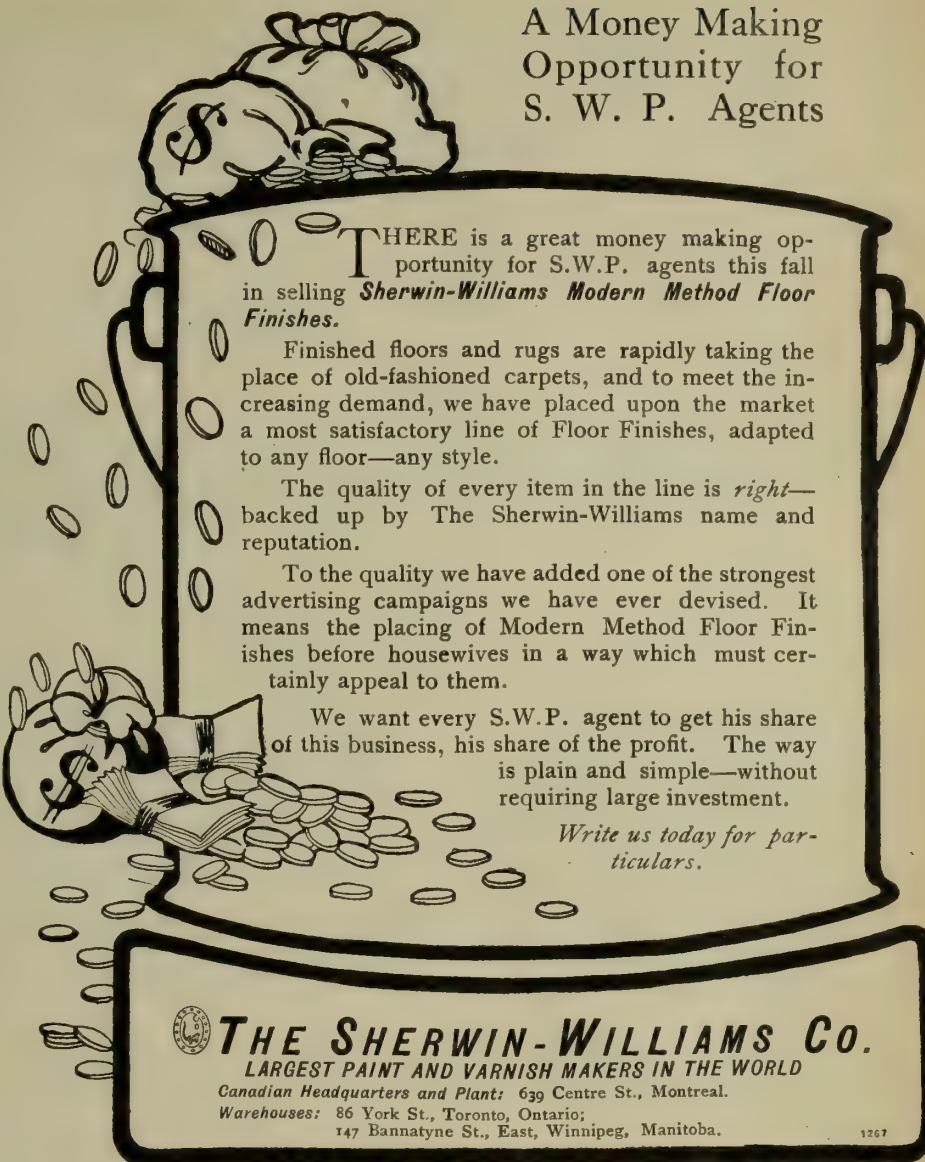
A. B. ORMSBY, Limited, Toronto, have issued a folder which should be in the hands of all the trade as well as of all who think of erecting any foundry, factory, mill or large store. Skylights have won their place in many classes of buildings and their advantages are such that all builders should secure information regarding a modern, complete one like the Ormsby skylight. Among the recent orders received by this firm was one for the C.P.R. locomotive shops at Winnipeg, calling for 60,000 feet and one for the Locomotive Machine Co.'s works at Montreal, calling for 40,000 feet of wired glass. This folder is well illustrated, gives its information tersely and lucidly and is worth writing for.

Glacier Metal Company.

The Glacier Metal Co. manufacturers of "Glacier Anti-Friction Metal," a high-class babbitt metal, have for distribution large private postal cards on which are given tables showing the prospects for the Presidential elections in the United States next November. The number of electoral votes necessary is 476, of which the Republicans claim 183 and the Democrats 162 as sure, while 131 are admittedly doubtful. The list of States and their political leanings are given, the card being a most useful one to any person interested in the big contest in the neighboring Republic.

Specialties for Sportsmen.

The Marble Safety Axe Co., Gladstone, Mich., are making a feature of specialties for hunters and fishermen. Among their novelties are "Marble's" safety pocket axes and knives, hunting knives, yacht and canoe knives, skinning and fish knives, camp carvers, automatic gaffs, compasses, gun and rifle cleaners sights, etc., rifle and revolver rods, shell extractors, gun slings, game bags, belts, pads, etc., etc. All these goods are particularly high class and are especially designed for expert hunters. Any enquiries from the Canadian trade will



A Money Making Opportunity for S. W. P. Agents

THERE is a great money making opportunity for S.W.P. agents this fall in selling *Sherwin-Williams Modern Method Floor Finishes*.

Finished floors and rugs are rapidly taking the place of old-fashioned carpets, and to meet the increasing demand, we have placed upon the market a most satisfactory line of Floor Finishes, adapted to any floor—any style.

The quality of every item in the line is *right*—backed up by The Sherwin-Williams name and reputation.

To the quality we have added one of the strongest advertising campaigns we have ever devised. It means the placing of Modern Method Floor Finishes before housewives in a way which must certainly appeal to them.

We want every S.W.P. agent to get his share of this business, his share of the profit. The way is plain and simple—without requiring large investment.

Write us today for particulars.

THE SHERWIN-WILLIAMS CO.
LARGEST PAINT AND VARNISH MAKERS IN THE WORLD
Canadian Headquarters and Plant: 639 Centre St., Montreal.
Warehouses: 86 York St., Toronto, Ontario;
147 Bannatyne St., East, Winnipeg, Manitoba.

receive full attention if Hardware and Metal is mentioned.

Nott Tube Skates.

W. G. Nott & Co., 2051-2 Yonge street, Toronto, have already won a good name for their "Nott" tube skates, which are guaranteed not to break, yet are light and neat. Although they are made of special tool steel and are brazed with reinforced lug connections, they can be retailed to advantage at \$5. The firm has issued literature giving full information, with illustrations of this skate. Any of the trade desiring to handle a popular racing skate should see this literature.

J. E. Westcott, of Galt, formerly of West Lorne, has bought out the hardware, stove and tin business of Frank Rosser, Ailsa Craig.

THE ALLIS-CHALMERS-BULLOCK COMPANY.

THE annual meeting of the stockholders of the Allis-Chalmers-Bullock Co. was held in the head offices at the Coristine Building, Montreal, on Wednesday, September 21st. President Bullock was unable to attend and in his absence his address was read by Secretary-Treasurer Cayford. The address showed that satisfactory progress is being made by the new company. The works at Rockfield are being extended and new machinery is being installed which will enable the management to manufacture in their own plant a greater part of the electrical machinery for which they receive orders. The sales for the month of August made a very encouraging showing, which points to an increased business in the future.

Business Changes

ONTARIO.

W. R. KILPATRICK, general merchant, Copper Cliff, has assigned to Daniel L. McKinnon; meeting of creditors Oct. 1.

Geo. Knife, painter, Burlington, is dead.

G. Banghart, general merchant, Cairo, is selling out.

J. Balfour, general merchant, Kippen, has admitted G. L. McCandless to partnership.

C. M. Irwin, general merchant, Arthur, has advertised his hardware business for sale.

The meeting of the creditors of M. Greenspoon, general merchant, Hawkesbury, was announced for Sept. 29.

QUEBEC.

Collyer & Brock, electrical contractors, Montreal, have dissolved.

D. Richard, general merchant, St. Raymond, has assigned to V. E. Paradis.

The assets of L. E. Desilets, general merchant, Shawinigan Falls, have been sold.

Chartrand and Turgeon are curators to A. Guimond & Co., hardware dealers, Montreal.

The assets of the Sheffield Cutlery Co., Limited, Montreal, are to be sold by tender.

The assets of S. H. Frigon & Cie., general merchants, Three Rivers, have been sold.

The assets of J. H. Constantin, general merchant, Nominigue, are to be sold on Oct. 1.

J. G. Lacoste, general merchant, St. Andre Avelin, has succeeded Mrs. J. N. Valliere in business.

Demand of assignment has been made of F. E. Came, manufacturer of railway specialties, Montreal.

J. H. Therien, general merchant, St. Gregoire, has assigned; meeting of creditors announced for Sept. 26.

Abondius Galarneau & Ovide Vezina have registered under the style of Galarneau & Vezina, plumbers, Montreal.

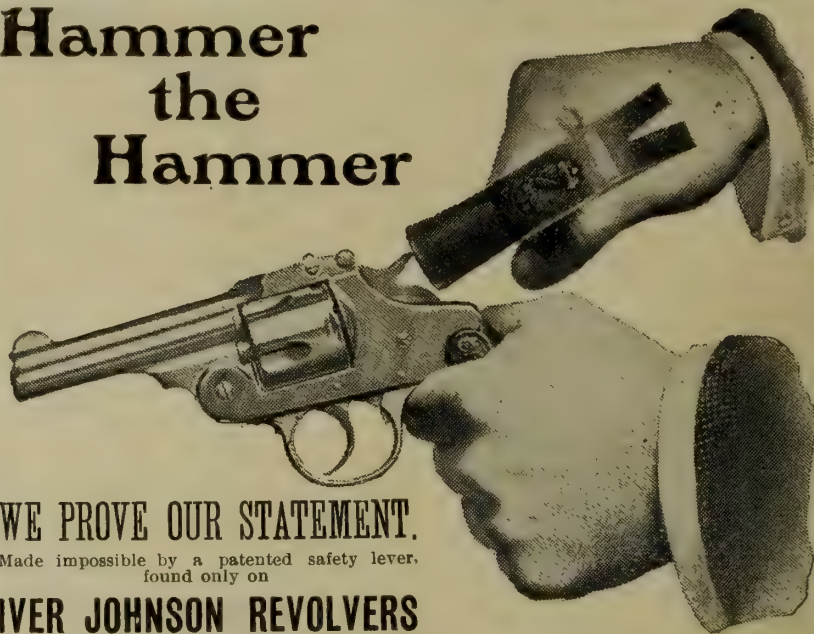
NOVA SCOTIA.

John F. Stairs, president of the Nova Scotia Steel & Coal Co., Limited, New Glasgow, is dead.

W. B. K. MacRury, hardware dealer, Sydney, has registered consent for Mary A. MacRury to do business in her own name.

**ABSOLUTELY SAFE.
ACCIDENTAL DISCHARGE IMPOSSIBLE.**

**Hammer
the
Hammer**



WE PROVE OUR STATEMENT.

Made impossible by a patented safety lever.
found only on

IVER JOHNSON REVOLVERS

Our booklet "Shots" and latest fire arms catalog contain the whole story in a nut shell. Send for them.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

PRINCE EDWARD ISLAND.

W. E. Sullivan, general merchant, Northam, has assigned.

MANITOBA AND N.W.T.

A. N. Sherman, machinist, Deloraine, has sold out.

D. J. Dutton, general merchant, Sinaluta, has sold to Bell Bros.

C. F. Travis, miller, Elkhorn, has advertised his business for sale.

McClocklin Bros., general merchants, Red Deer, have been burned out.

A. Leens, general merchant, Winnipeg Beach, has moved to Winnipeg.

J. J. Hewson, gunsmith, MacLeod, has sold to Howard Case & Co.

W. A. Robertson, general merchant, Lewisville, has sold to J. G. Gibbon.

Hastings & Kelly, general merchants, Sinaluta, have dissolved partnership.

Lorimer & Brawn, general merchants, Crandell, have sold to Brawn & Warren.

J. S. Dart, general merchant, Meota, has been succeeded by Dart & Fitzgerald.

A. C. McIntosh, general merchant, Penhold, has assigned to J. W. Mitchell, Penhold.

The stock of Morino & Walter, gener-

al merchants, Coleman, has been sold to A. V. Lang.

The stock of W. S. Grout & Co., general merchants, Swan River, has been sold by sheriff's sale.

R. Cross & Co., general merchants, Killarney, have sold their Holmfield branch to H. T. Irwin & Son.

BRITISH COLUMBIA.

J. H. Fife, of Fife & Hunter, hardware dealers, Vancouver, is dead.

Jas. McNichol, general merchant, Midway, has suffered loss by fire; partially covered by insurance.

THE SALESMAN AND HIS IDEAS.

A salesman in one sense may be regarded as a "clearing house" of commercial ideas. He is brought into daily contact with men of business; he absorbs an idea here, and giving it off there, receives in return another thought.

A merchant, who through an obstinate adherence to the belief that he knows it all, refuses to grant a salesman every possible courtesy, who does not give him an opportunity to give out ideas, is neglecting the greatest possible source from which to draw thought, on which he may base right opinions for advancement.

October 1, 1904

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO. LIMITED

TEMPORARY WAREHOUSE:

212-218 COWAN AVENUE, TORONTO.

Wholesale
only

Only
wholesale

Sample Room at 21 SCOTT STREET, Telephone Main 4056.

Telephone:—Office, Park 1584.

(Where orders may be left if not convenient to visit our Warehouse at Parkdale.) Telephone:—Warehouse, Park 1585

Building Paper.



Plain Sheathing.
Plain Straw Sheathing.
" Fibre "

RETURNED
OCT - 1 1904

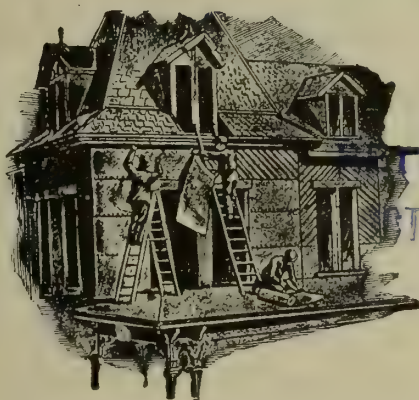


Tarred Sheathing.
Tarred Straw Sheathing.
" Fibre "
Resin Sized "
OK I & L "

RETURNED
OCT - 1 1904



Asbestos Building Felt.
Thin, Medium, Heavy.

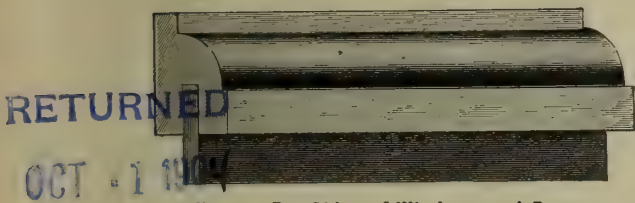


RETURNED
OCT - 1 1904



Tarred Roofing Felt.
Moth-Proof Carpet Felt.

Weather Strips.



No. 61—For Sides of Windows and Doors.

RETURNED
OCT - 1 1904

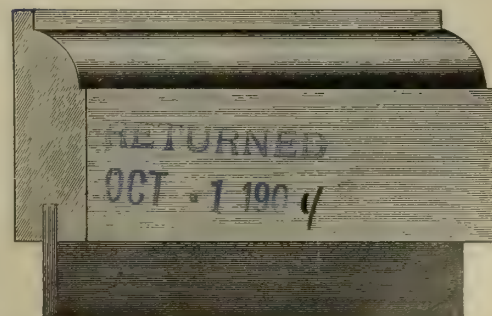
Put Book 24
Page 50
and



No. 62—For Centre of Windows.



No. 60—For Sides and Tops of Windows.



No. 64—For Bottom of Doors.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

Our prices are right.

GRAHAM NAILS ARE THE BEST.
Factory: Dufferin Street, Toronto, Ont.

We Ship Promptly.

Made in Canada

The steel rail mill of

The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.

is now in operation and turning out

A. S. C. E.
Standard
Section

Steel Rails

of
Highest
Quality

Your specification will have our best attention.

Offices:

Canada Life Bldg.,
MONTREAL.

100 King St. West,
TORONTO.

Drummond, McCall & Co.

General Sales Agents

The Algoma Steel Co., Limited

ASBESTOS

Pipe and Boiler Covering, Sheathings, Building Felts,
Roofings, Wall Plaster, Cements, Packings and
Household Articles.

Catalogue, samples and lowest prices on request.

Write for our special Roofing Proposal to dealers.
It is a winner.

THE FAIRBANKS COMPANY

MONTREAL.

TORONTO.

WINNIPEG.

VANCOUVER.

MACHINERY

THE MACHINERY MARKETS.

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Sept. 29, 1904.

DESPITE the fact that last week and the early part of this, weather conditions were in no great manner conducive to business, the trade done has been of a very encouraging volume. Nearly all lines have experienced a feeling of activity which would indicate that the Fall season has well begun, and in a satisfactory manner. No large orders for contracts are under way at present, but there has been a steadiness of smaller and medium sized orders, of which the aggregate is large. The demand for wood-working machinery and saw mill equipment has increased and numerous orders along these lines are reported. Machine tools have been required in many quarters and not a few lathes, power presses and drills have been placed. A few small sized boilers and engines have been installed, as well as some large capacity feed water heaters. Contractors' supplies are still required in considerable quantities, so that a good business is being done in that line. There is very little electrical machinery of large capacity moving, but for the smaller sizes of generators and motors there is a good demand, while the electrical supply business is very brisk.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, Sept. 30, 1904.

Several buyers of metal working machinery have been in town during the past week. Consequently there has been considerable activity and a fair amount of business transacted. A good deal of repair work is being done, so the movement of second-hand machinery of all kinds is fairly large.

The demand for electrical goods of all kinds is fairly brisk, a moderately large number of individual motors having been taken. Everything considered, the machinery trade here is satisfactory.

Water Hammer in Steam Pipes.

THE Locomotive calls attention to the danger of putting in steam pipes in such a way that they can act as traps and collect any considerable quantity of water of condensation. When the steam is turned into a pipe containing entrapped water, it is unfortunately common experience that the entering steam causes the water to surge about in some way that is not entirely understood, so that it is often thrown against the fittings, with such violence as to cause some part of the pipe line or its connections to break. The reality of the danger from entrapped water in piping is often disputed by those who have not seen the results, but the extensive experience of the Hartford Steam Boiler Inspection and Insurance Co. indicates that accidents from this cause not only happen, but happen often. They give several cases of the kind that have come under their notice.

In one case the boilers were of the water tube type with three drums each. Immediately upon the top of this boiler there was a safety stop valve which was designed to close automatically in case of any abnormally violent rush of steam through the feeds to which it was attached. This automatic valve was closed at the time of the accident, and another stop valve, situated on the same feeder where it entered the main, had also been closed. The boiler had been out of service for a time, but pressure had been raised upon it again, and it was about to be cut in with the other boilers of the battery. For this purpose the latter stop valve was opened, the intention being to open the automatic valve immediately afterwards. It is probable that owing to leakage through one or the other of the two valves there had been an accumulation of water in the space between these valves, the entering steam causing this water to surge around through the curve pipe in such a way as to throw it violently against the automatic valve. At all events the stop valve was hardly opened when a section of the casing of the automatic

valve was knocked out, several men who were standing by being scalded. When two valves are used on a steam pipe in this manner, provision should always be made for draining the space between them before the valve is opened, and it should be opened very slowly indeed. Furthermore before any considerable quantity of steam is admitted to the pipe, both valves should be eased off from their seats slightly to establish a moderate circulation, this being allowed to continue for some moments before the valves are opened further. Other causes were shown in which it was quite evident that water-hammer was the cause of the trouble.

Drips are excellent things on a pipe line if they are faithfully used, but there is a temptation to neglect them, after the attendant has operated the plant for a considerable time, without trouble; and it is always better to design the pipe line so that no drips will be necessary, the pipe emptying itself by the natural action of gravity.

A steam line should never be arranged so that it can entrap water. If there is any doubt about the perfect drainage in any particular case, drip pipes should be provided so that the doubtful part can be thoroughly drained before steam is turned into it; but it should always be remembered that any pipe whose safe condition depends on the opening of a drip, as a distinct operation to be performed before the valve is open, must be regarded as an element of weakness about the plant. Steam valves under all circumstances should be opened and closed very slowly, and when a pipe contains more than one valve they should all be eased from their seats slightly, for some moments, so as to permit of the establishment of a certain amount of circulation before they are opened up fully. By attending to these various precautions it should be quite possible to avoid, in large measure, the serious accidents that are continually occurring in connection with steam lines, and which are attributable to water-hammer or other analogous causes.

INGENIOUS MOTOR APPLICATION TO A PLANER.

IF high speeds be attempted on large planers of the shifting belt type, numerous belt troubles are experienced. Planers of this style are, therefore, generally run at comparatively low table speeds.

In the case of a motor-driven planer the overload on the motor at the instant of table reversal from the forward to the return stroke becomes severe unless an excessively large motor be used. The accompanying cut shows a view of a heavy 96-inch planer recently installed by the Crocker-Wheeler Co., at its works at Ampere, N. J., in which these objectionable features have been minimized.

L. W. Pond Machine & Foundry Co., of Worcester, Mass., were the builders

ward speeds of 35, 27, 20 or 15 feet a minute. If other cutting speed variations are desired, they are obtained by varying the motor speed accordingly, the motor being operated on the Crocker-Wheeler multiple voltage variable speed system, an ideal one for any tool whose power demand increases with the speed of operation. This applies particularly where a wide speed range is desired or where there are heavy momentary overloads such as usually occur when the table of a planer reverses.

It is often desirable to run the table at very slow speeds, as in setting up work, etc., although on this planer but slight variations of motor speed are needed to obtain any desired cutting speed, and then the wide motor speed

few slight alterations in a standard planer, the main points being the use of a proper sized fly-wheel, the proportions of the lower driving pulleys and the use of the lightest weight pulleys consistent with strength. The two latter changes cause the reverse to take place quickly, smoothly and without any of the customary objectionable shrieking of belts.

The total work done in stopping and starting the moving parts at each reversal (this work being transformed into heat that destroys the belts) is but one-third of that which is wasted where the design is the customary one for planers of this size. Although the planer has been used chiefly on very short stroke work for the last six months, it has been found unnecessary to employ the belt tightening idlers intended for use in case the extremely hard duty should cause the belt to stretch unduly. This interesting machine is the result of extensive experiments and study of the problem made by the Crocker-Wheeler Co. in the course of its investigations into the subject of motor-driven machine tools.

Flywheel Disasters.

Ninety per cent. of all flywheel accidents are said to be due to a failure of the governing mechanism through some misadjustment, derangement or accident to reduce the steam, when the load on the engine is reduced, which permits the engine to run away. The wide fluctuation of the load on paper mills is a common cause of flywheel accidents.

Measuring Horse Power of Motor.

PROBABLY the most common method of testing the efficiency and capacity of motors, is with the prony brake, although in factories where spare dynamos are to be had, with load available for them, there can be no question that belting the motor to the dynamo, with an electrical load, is by far the most accurate way, and the easiest to carry out.

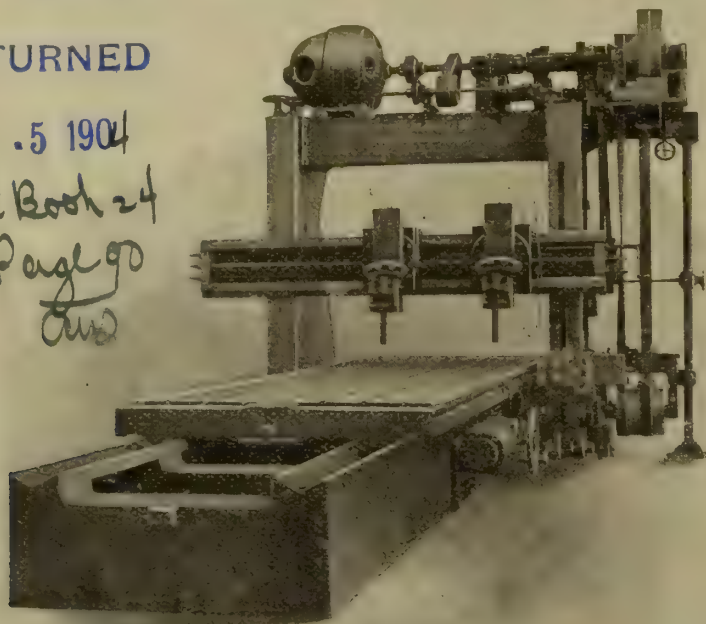
In this test, a pulley of suitable dimensions is applied to the motor shaft, and some form of friction brake is applied to the pulley to absorb the power. One of the simplest forms of this friction brake consists of two straps, grooved to fit part of the circumference of the pulley; these bolted together on the pulley, and having a cross piece, one end of which rests upon the scale balance, and having a counter balance at the other end. As the friction of the brakes creates a great amount of heat, some method of keeping the pulley cool is

RETURNED

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Cut Book 24

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Cus



Electrically Driven Planer.

of this planer, which has a 24 foot table and three heads. The motor, a 35 h. p. compound wound, is mounted on top of the housing. It is coupled to the shaft driving the fly-wheel pulley, and the diameters of the pulleys and gearing under the table are proportioned to give a return table speed of 70 feet a minute with the motor running at its maximum speed. The upper pulley for the forward-motion belt is mounted on a sleeve concentric with the above mentioned shaft, and by means of suitable gearing and jaw clutches operated by a hand wheel conveniently placed at the side of the planer, this sleeve and pulley may be driven at any one of four speeds by the inner shaft, thus giving for a return table speed of 70 feet a minute, for-

range is a great convenience, and the size of motor was not increased at all to obtain the variable speed features. The unusual feature of the equipment is that the reversal of the table, even at the highest speeds, causes practically no peak load on the motor; or stated another way the ammeter readings for a complete cycle with 8-ton casting on table, running at maximum speeds, are as follows: During cutting stroke, 50 amp.; at reversal, 75 amp.; during return stroke, 70 amp.; at reversal, 70 amp. Thus it requires hardly any more power to reverse than it does to move the table during the return stroke, which means that a considerably smaller motor can be used than would otherwise be necessary. This desirable result has been obtained by making but a

necessary if the test is to continue any length of time. A pulley with deep inside flanges is often used; water is poured into the pulley after it has reached its full speed, and will stay there by reason of its centrifugal force, until it is evaporated by the heat, or the speed is lowered enough to let it drop out.

The work done on the brake per minute is the product of the following items:

1 = the distance from the centre of the brake pulley to the point of bearing on the scales in feet.

n = the number of revolutions of the pulley per second.

π = the ratio of the circumference of a circle to its diameter.

w = weight, in pounds, of brake bearing on scales. Then the power =

$2 \pi l n w$ = foot pounds, per second.

$2 \pi l n w$

$H P = \frac{2 \pi l n w}{550}$

550

The input to the motor is measured in watts, being the product of amperes and volts and can be reduced to horse-power by dividing by 746; or the power absorbed by the brake can be reduced to watts as follows: If the length 1 be given in centimeters, and the weight w be taken in grams, the power absorbed by the brake is measured directly in ergs, as one watt equals

10^7 ergs, the Watts' output at the brake
 $\frac{2 \pi n l w}{10^7} = W$.

10^7

Watts' input =

W^1 and efficiency % = $\frac{W}{W^1} \times 100$.

If the output is measured in l = feet and w = lbs., then $W = 2.72 \pi l w$.

$\frac{W^1}{746}$
 Input in h p = $\frac{W^1}{746} = h p$.

$\frac{2 \pi l n w}{550}$
 Output H P = $\frac{2 \pi l n w}{550}$.

Efficiency per cent. = $\frac{100 H P}{h p}$

If it is desired to know the friction and other losses in the motor after the brake test has been made, the brake can be removed, and the watts necessary to drive the motor at the same speed as when loaded can be ascertained.

Process For Hardening Iron.

A new process for hardening iron has been developed by two Prussian inventors, according to the Engineer. It consists in adding to iron a small percentage of phosphorus combined with a

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SMOKESTACK WANTED—40 or 50 feet of 24-inch stack; new or second-hand; in first-class condition; also small lath machine. Box 80, Providence Bay, Ont.

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WANTED—Second-hand duplex pump; about 10 x 6 x 12; state particulars by letter. John E. Russell, 908 Queen street east, Toronto.

WANTED—Second hand water wheel; 36 in. or over; left hand. Woods Bros., Napanee.

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WANTED—10 h.p. Motor of 110 volts. State how long in use and lowest price. Address P.O. Box 378, Winnipeg.

WANTED—To purchase at once for cash, small second-hand Gasoline Engine, 4 h.p., full outfit. Apply R. Gillespie, Norwood, Ont.

WANTED—Hand Fire Engine, must be in good repair and cheap. Write A. B. MESSECAR, Burford, Ont.

WANTED—Good second hand pair tinnern's squaring shears, either 24 or 30 in. cut, state make, how long used, condition and price. Bennett & Son, Gananoque.

WANTED—Second-hand Plate Chopper. Pulleys and Shafting to connect. Lock Box 22, Burford.

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ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal

PORTABLE BOILER and engine, planer and matcher, for sale, cheap. G. Halliday, Elgin, Ont.

MACHINERY FOR SALE.

SECOND-HAND saw-mill machinery for sale. Buyers are requested to write regarding the below to W. H. COWELL, HARDWARE AND METAL, 10 Front St. East, Toronto.

1 Waterous Side Crank Engine, cylinders 12 x 14 in.; $4\frac{1}{2}$ in. shaft.

1 Fly Wheel Pulley, 18-in. face, 6-in. dia.; 1 Driving Pulley, 12-in. face, 36-in. dia.; 1 Driving Pulley, 8-in. face, 26-in. dia., bore $5\frac{1}{2}$ in.; bore bushed to $4\frac{1}{2}$ attached, out-board bearing.

1 Return Tubular Boiler, 52-in. dia., 14 ft. long, 52 $8\frac{1}{2}$ -in. tubes.

1 Shaft, 2-in. dia., 9 ft. long; 1 pulley, $5\frac{1}{2}$ -in. face, 6-in. dia., wood; 1 pulley, $6\frac{1}{2}$ -in. face, 10 $\frac{1}{4}$ -in. dia., iron attached, 2 bearings.

1 Shaft, 2-in. dia., 37 in. long; 1 Pulley, $5\frac{1}{2}$ x 24 in.; 1 Pulley, $6\frac{1}{2}$ x 10 $\frac{1}{2}$ in., attached, two bearings.

1 Shaft, 2 $\frac{1}{2}$ in. x 15 ft. 10 in.; 1 Cone Friction Pulley, wood, 10 in. thick, 13 $\frac{1}{2}$ in. small dia., 32 in. large dia.; 1 Pulley, 11 x 30 in., wood; 1 Pulley, 4 x 10 in., wood; 1 Pulley, 7 x 48 in., iron attached, 3 bearings.

1 Shaft, 2 $\frac{1}{2}$ in. x 7 ft. 11 in.; 1 Cone Friction Pulley, iron, 7 $\frac{1}{2}$ in. thick, 14 in. small dia., 28 $\frac{1}{2}$ in. large dia.; 1 Pulley, 10 x 24 in., iron attached, 2 bearings; 1 Eccentric, for throwing frictions in and out of gear.

1 Shaft, 1 $\frac{3}{4}$ in. x 9 ft.; 1 Friction Pulley, 8 x 10 in., winding wood drum, 6 in. x 4 ft. 6 in., 4 in. flanges, attached, 2 bearings.

1 Shaft, 1 $\frac{3}{4}$ in. x 5 ft.; 1 wood pulley, 10 x 76 in., 2 bearings attached.

1 Belt Tightener Pulley, 16 x 20 in., in swinging frame, 1 $\frac{3}{4}$ -in. shaft, 2 bearings.

1 Shaft, 2 $\frac{1}{2}$ in. x 9 ft.; 1 drum, 10 in. x 3 ft. 7 in., 12 $\frac{1}{2}$ in. flanges; 1 pulley, 7 in. x 45 in., wood, 2 bearings attached.

1 Rogers Pat. Emery Wheel, saw sharpening machine, manufactured by Hart Emery Wheel Company, Hamilton, Ont., takes 84-in. saw; counter shaft and pulleys for same.

1 Piece of Shafting, $4\frac{3}{4}$ in. x 10 ft. 2 in.

1 14-in. Edging Saw.

1 49-in. Circular Saw.

1 52-in. " "

1 60-in. " " inset teeth.

1 28-in. Slab Saw on arbor and frame.

9 Slab Rollers, iron, 20 x 10 in. dia. in bearings, 2-in. shafts.

1 Edging Table, 15 ft. long x 17 $\frac{1}{2}$ in. wide, on iron wheels, and bed with iron rails, 32 ft. long.

1 $\frac{3}{4}$ -in. Saw Arbor, in frame, also friction pulleys, levers and gear for operating log carriage, complete.

1 Log Carriage Rack, driven on iron rails, complete.

1 Pulley, 6 x 18 in., 2-in. bore.

1 Paper Pulley, 6-in. face, 11 $\frac{1}{2}$ in. dia., 13 in. dia. over flanges, 2-in. bore.

46 ft. of new Main Belting Co.'s Leviathan Belt, 14 in. wide, $\frac{1}{4}$ in. thick.

Also a lot of second-hand belting, some of which is in fair condition. The machinery is in good condition. There is no smoke stack. Boiler front and grates in good condition; boiler in brick setting. Write regarding above to W. H. COWELL, HARDWARE AND METAL, Toronto.

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large amount of carbon. The iron is heated in a tempering powder, consisting of bone dust, to which is added 300 grains of yellow prussiate, 230 grains cyanide of potassium, and 400 grains of phosphorus. The receptacle is closed and luted with clay and raised to a clear red or white heat. The material heated is then taken out and plunged while still hot into a warm bath. It is claimed that this will harden the surface of a piece of iron weighing four hundred pounds to a depth of .04 inches, and that the iron can neither be cut nor chipped by the best steel used and that it can be readily welded.

The Ideal Foreman.

THE subject was recently discussed in a paper by Frederick W. Turner as follows: We can readily appreciate how the bright boy idealizes the man who treats him kindly and who gives him an opportunity to learn. The lazy boy feels kindly disposed towards the foreman who gives him an easy task. The poor and careless workman wants a foreman who will pass work which is not a credit to the craft, and who is blind to the evils of laziness, and possibly to those of the drink habit. The skilled workman asks nothing of a foreman but to be treated like a man, to be given a proper share of the desirable work, and to be allowed to work out his own salvation along these lines: The owner looks to his foreman to make money for him. In many cases he expects him to make more money than the capital invested and the methods pursued will warrant. This means that the foreman is expected to crowd the workmen to the limit, and to keep both the plant and the help as near the breaking point as it is possible to carry them. Some owners and managers, however, are content with a reasonable return on their property, pursue up-to-date methods, and give to the workmen some thought beyond the mere capacity to earn dividends. It is to be regretted that men of this type are not more often found in positions where their humane policy can be held up as an example to those of a more sordid and grasping nature.

Before all other qualifications, it is necessary that the foreman should be what the word implies—first, a man; and, second, a leader. If he is a man in the true sense of the word, he cannot fail to be respected by all self-respecting workmen. If he is an honest leader, he will conduct those workmen along the lines laid down by the owners as the policy of the establishment. Too often the foreman is looked upon merely as the buffer between the firm and the men. He is supposed to act as peace-

maker, and to keep them from flying at one another's throats. Under such conditions, it is obviously impossible that a man can be in full favor with either party. Toward the firm the foreman should be respectful, obedient and energetic; toward the workmen he should be firm, just and sympathetic.

Of all the qualities going to make the ideal foreman, that of tact is the most important. It means that the men will be treated as individuals, their failings noted and corrected, their good points enlarged upon and due credit allowed for them, and that the shop life will be freer and more natural. With this tact, or faculty of governing along the line of least resistance, must be coupled absolute fairness. Nothing will create such an atmosphere of discontent as a suspicion that the foreman has favorites. If these supposed favorites happened to be relatives of the foreman, the idea is much harder to combat. For that reason, personal friendship and family obligations will be left outside the shop by the man who wishes to succeed as leader of workmen. A decided, but not aggressive, manner of passing opinions upon questions serves to inspire the men with respect for the foreman, especially if such decisions are rendered promptly, and they prove, in the large majority of cases, to be accurate. Having made a decision or taken a decided stand on any matter, it will not do to deviate from that position, unless it is so clearly wrong as to be apparent to the casual observer.

Fairness, dignity, and firmness are qualities that can be quite closely defined; but tact, and its fellow-attribute, executive ability, are rather elusive of close description. They are of the inherited type, and can be cultivated only to a very limited extent. If a man does not possess tact and executive ability, it is useless for him to accept a position where they are essential, in the belief that they will develop as required.

While workmen are supposed to be paid only for the time spent in the shop, it is also true that a man's value cannot be reckoned entirely by the quality of his work and the number of hours of labor. His conduct outside the factory invariably leaves its impress on his conduct within, and on the product of his work. This is even more noticeable in the case of a foreman, for, although workmen generally would deny it, they do not and cannot have a wholesome respect for a foreman who is not respected by the community. Men will say they do not care what a foreman is outside the shop, but their better nature will not allow them to look up in any sense to a social pariah.

While an absolute grasp of all the details of the business, viewed from the

workman's standpoint, is not absolutely necessary to a foreman possessing tact and executive ability, it adds greatly to a foreman's prestige to be able literally to show any workman just how any operation should be performed.—Iron and Machinery World.

Gasoline Engines and Launches.

J. S. LARKE, Commercial Agent for Canada in New South Wales, Queensland and New Zealand, makes the following report:

"There is a market for both gasoline engines and launches but no sample of Canadian product has yet been seen here, and orders are not likely to be given without a sample. They must be up-to-date and a catalogue sent me has an ignition device that was superseded some time ago. The oil launches sold—and as yet the demand is not large—are from the United States. The trade was begun by a wealthy Australian seeing them in a visit to that country and ordering one or two there. The satisfactory working of these purchases led to orders being given by others. It would be difficult to get an order for a Canadian launch without a demonstration of its effectiveness."—Mr. Larke's address in Sydney, Australia.

Care of Gas Engines.

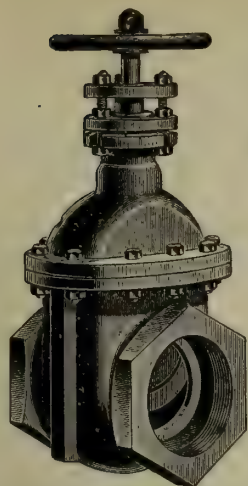
A WRITER in the Technical World makes these suggestions regarding the care of gas engines:

Special attention should be paid to the piping, to see that it is properly arranged and all leaks prevented. Cold water should run through the water jacket in a steady stream, but where this is not practicable the circulating tank and pipes must be large enough for good circulation through the jacket.

The gasoline should be stored underground, outside of the building.

Great care should be taken to prevent leakage in the feed pipes, special attention being paid to all joints, which should be made tight without the use of red or white lead. As the exhaust pipe conveys heated gases it should be well protected from inflammable material by the use of some noncombustible substance.

The muffler consists of a piece of sewer pipe about 10 inches in diameter and 2 feet long, set in the ground just outside the wall of the engine room. The exhaust pipe of the engine enters the muffler through a wooden cover, which is perforated with a number of half-inch holes. A branch is led off



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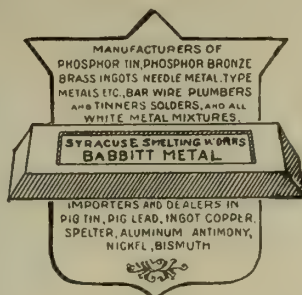
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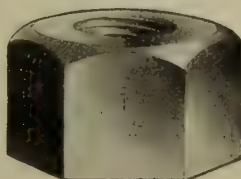
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from the exhaust pipe and opens into the air, a valve being inserted near the junction of this pipe with the exhaust pipe. This pipe is for the purpose of relieving the cylinder of back pressure at the time of starting up, and also in case the holes in the muffler cover become closed up with snow or ice between the times of shutting down and starting up. After a few explosions the relief valve is closed. This muffler has been found to suppress almost completely the sound of the exhaust.

Another "wrinkle" which may be of interest to the reader consists in supplying a small radiator with the water discharged from the water jacket of the engine, thus cooling the discharged water and at the same time contributing to the heating of the engine room.

The igniter, which is an important part of the internal-combustion engine, must be well cared for. If it is of the wipe-spark style the points will wear longer if the polarity of the current is changed from day to day. This can easily be accomplished by means of a double-throw switch, connected as shown. This switch may also be used for the main switch. For this type of igniter storage batteries are, in many cases, too powerful, a small magneto giving better results. It is a good plan to have two sources of current.

It is of great importance that the right kind of oil, and the best grade of that kind, should be used for lubricating the cylinder. Only mineral oil should be used on the parts exposed to heat. For other parts, experience shows that a good quality of grease is better than oil, as in cold weather the oil becomes stiff making it hard to start the engine. Grease is also cleaner, easier to handle and cheaper than oil.

The quality of the gasoline is also an important factor to be considered, and it is essential that it should be free from water, grit, etc.

In the examination of the engine, which should be done before starting up and after shutting down, special attention must be paid to the governor, to see that it is in good order. All nuts and screws must be tight, and the engine fastened to a very solid foundation.

Always keep the engine in perfect order, and never let it get out of repair. There is no reason why the internal-combustion engine should not give perfect satisfaction if properly adjusted and cared for, and nine times out of ten unsuccessful results are due to mismanagement and neglect.

ELECTRICAL GOODS AND SUPPLIES

Group Lighting.

THE long Summer days are now drawing to a close, and householders at this time of the year begin to consider the light question for the Winter. Truly, as someone has said, we are living in the lap of luxury when we stop for a moment to compare our comforts with those of our grandfathers and their predecessors. The candle age has long passed by; the coal oil lamp is a thing of the past; gas, with the modern devices for using it, is a good illuminant, but the acme of comfort, elegance and cleanliness is the electric light. Electric light lends itself so aptly to artistic effects, and is so satisfactory

elegant designs of electric fixtures, which can be purchased within the bounds of almost anyone's pocket, that it seems strange that every user of electric light does not equip his house and business premises with attractive fixtures. It is hard to understand why so many people still continue to use the old-fashioned drop cord with the light attached, when artistic fixtures can be purchased for little more than the old-fashioned arrangement costs. Hardware merchants throughout the whole Dominion of Canada would find the addition of a neat line of fixtures a very satisfactory department. The profits are good, and the stock carried need not run into a great deal of money.



7 Light Ceiling Group.

from a sanitary point of view, that of all illuminants it is the most favored, and with good reason. No light is as steady and as healthy for the eye and body as electric light. Compared with gas and coal oil, the price is not against it. It may be a trifle dearer, but its decided advantages outweigh almost anything against it.

To obtain the artistic effects which are possible with the use of electric light, one does not need to expend a great amount of money. There are now on the market so many cheap but yet

Herewith is illustrated, as an example, one of a very handsome line seen in a catalogue furnished, giving an idea of effects obtained with electric light. Clusters of these lights can be used at no great expense, as 5 c. p. lamps can be used instead of 16 c. p.

The makers of the line shown have very neat and attractive fixtures at all prices, and for all requirements, and will answer enquiries and give full information and illustrations of their line to any hardware merchant or dealer contemplating the sale of these goods.

We make Electric Fixtures, Sockets and Cut-Outs.

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Electrical Supplies of all kinds.

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If subscribers will write direct to Munderloh & Co., Montreal, there is no doubt the result will be entirely satisfactory.

Secondary Standards of Light.

A PAPER recently read before the British Association discusses the question at some length in connection with the use of large bulb carbon filament electric incandescent lamps as secondary standards of light. Concerning their construction, the following precautions are to be taken: The filament should preferably be in the form of a single loop or horseshoe, and should be mounted in the large cylindrical bulb with great care, so that the plane of the loop lies in the axial line of the lamp, filaments being selected with the two sides of the loop in the same plane and not distorted. In some cases it is desirable to anchor the filament by a loose loop of platinum wire, sealed into the bulb, but such loop of wire should not touch the filament or constrain it when the lamp is at rest or in use. Owing to the fact that the 16 c. p., 100 volt filament is about 9 in. in length, it is desirable, if possible, to employ a 10 c. p., 60 volt large bulb photometric lamp as a standard. The 16 c. p., 100 volt lamp of this type is much used and the 16 c. p., 200 volt lamp has been made, but is not recommended. It is not desirable to employ two filaments in parallel, as they may then be at different temperatures; but they can be placed in series, one loop within the other, and both lying in the same plane. In setting the lamp in the photometer, great care must be exercised to adjust the lamp axis perfectly vertical, and a plumb line should be employed on the scale of the photometer bench. Several precautions which must be taken in the use of the lamp are also described. The great objection to all flame standards is the degree to which their candle power is affected by moisture in the air and changes in barometric pressure. There is practically no change in the candle power of the large bulb incandescent lamps with change of temperature of the surrounding atmosphere. The author finally gives some rules for equipping an electrical labora-

tory with the means of preserving a standard of light. He has arranged a simple apparatus consisting of a large bulb lamp, a rheostat and an ammeter, the range of which comprises merely the ordinary lamp currents. The ammeter is, however, not graduated to read amperes, but graduated to read candle power, so that if the rheostat is adjusted to make the ammeter needle point to any part of the scale, that scale reading would at once, without further calculation, give the candle power of the lamp in the normal direction. Although this apparatus is not accurate enough for laboratory purposes, yet for workshop or generating station purposes it is a convenient arrangement for obtaining a fairly accurate standard of light without the complications involved in the use of the potentiometer.

Standard Enclosed Fuses.

IN order to overcome the difficulties due to the lack of uniformity of sizes and ratings of the various enclosed fuses now upon the market, says the Electrical World and Engineer, and to be able to suggest to manufacturers proper details of construction for obtaining the most satisfactory dimensions in securing interchangeability of the fuses for any given capacity, a committee of the Underwriters' National

Electric Association has been collecting information regarding the enclosed type of fuses from manufacturers all over the country and has been conducting a series of tests to determine experimentally the advantages of certain constructive features.

Through co-operation with the Edison Illuminating Co., of Boston, and the Boston Elevated Railway Co., tests were conducted in the large power stations of these companies to ascertain the operation on short-circuit and otherwise of fuses of very large capacities, at 220 and 550 volts. The tests were so arranged that the fuses were subjected to conditions equivalent in all respects to those which obtain in any large system. As a result of the information obtained from the manufacturers and from the tests, the committee has recommended certain standards which are about to be adopted by the National Board of Fire Underwriters.

Trade with Mexico will begin, since the contract for a steamship service between Vancouver and that country has been awarded by the Government.

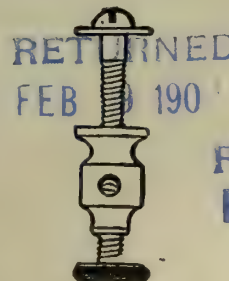
The Government has decided to leave the law as it is in regard to the prohibition of the export of logs. The Loggers' Association petitioned for its repeal.

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Binding Posts,
Batteries, Motors,
Motor Parts, in
fact anything that
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RETURNED
FEB 9 1905
To Montreal
Cut Bank 29
Page 98



OUR PRICES LEAVE YOU A HANDSOME MARGIN.

The Sayer Electric Co'y, 10-14 Beaver Hall Hill, MONTREAL.

The Central Canada Exhibition at Ottawa

NO better evidence of the growth of Ottawa as a manufacturing and commercial centre can be found than in the steadily increasing importance and popularity of its annual fair. The good people of Ottawa are citizens of no mean city, for not only is it the

visitors from every nation and clime. Realizing their responsibilities, therefore, the citizens of Ottawa have addressed themselves to the task of providing an exhibition that shall be worthy of the dignity and importance of their city, and this paper takes this opportunity of congratulating them on the

visited the fair grounds constituted a record in the history of the exhibition.

Aberdeen Pavilion.

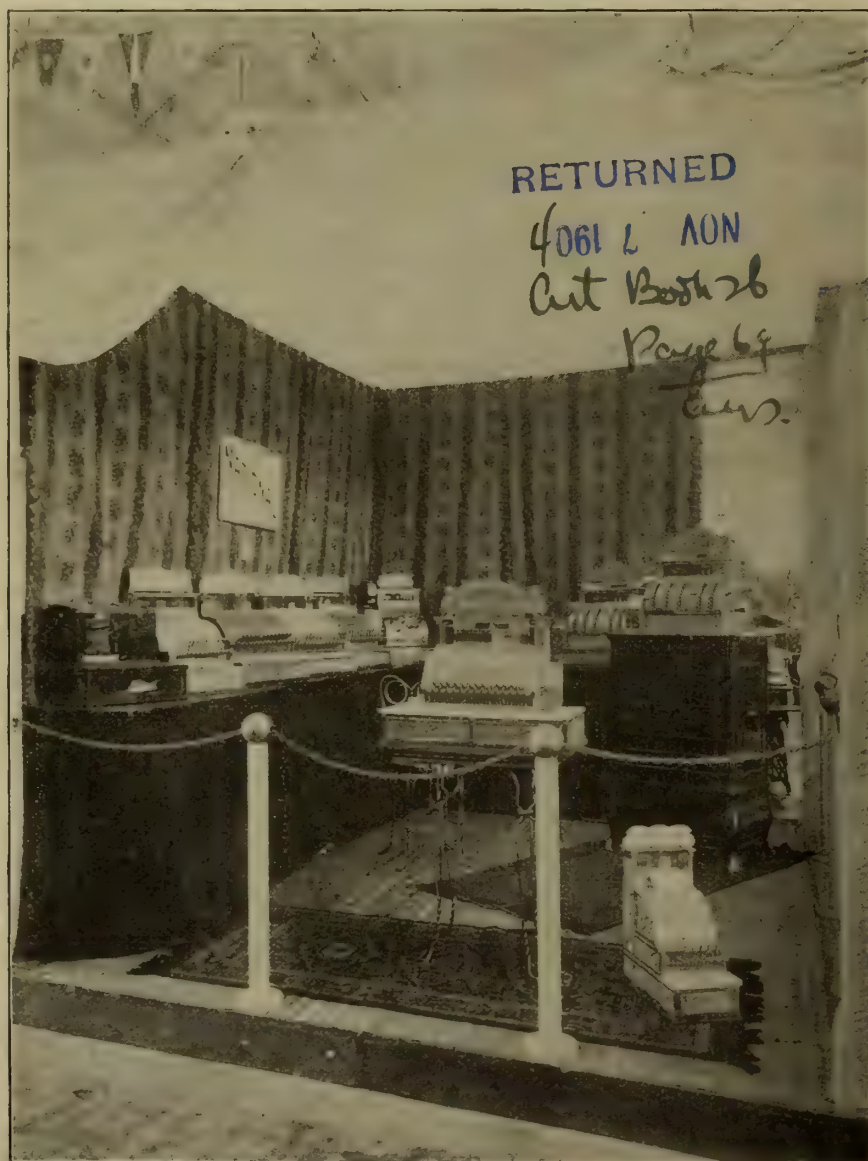
The main building, or as it is called, the Aberdeen Pavilion, was, of course, the centre of interest. Every inch of space that could be utilized for exhibits was taken and many exhibitors whose applications were late in arriving had to betake themselves to the other and less important buildings. The exhibits were one and all of a high order of excellence and much artistic skill and good taste were expended on their preparation. One was somewhat surprised to note the absence of any exhibit representative of the tea trade. It is difficult to account for this except on the supposition that they were crowded out. With this exception the display was thoroughly representative of Canadian industries. It was indeed, an object lesson on the brains, resources and industrial skill of Canada and its people.

Comparisons are always odious, but, without detracting in any way from the other classes of exhibits, one might say that the soap displays—represented by Pugsley, Dingman & Co., Lever Bros., the Richards Pure Soap Co., and the Metropolitan Soap Co.—were especially noticeable.

A good criterion of the value attached to the Canada Central Exhibition as an advertising medium was afforded by the fact that several exhibitors took this means of introducing new articles to the public for the first time. Entertainment, as well as instruction, was provided for the visitors to the pavilion in the shape of gramophones, musical instruments of different kinds, guessing contests and other devices to engage the attention of the multitude.

Machinery Hall.

The machinery hall had a full complement of exhibits, chiefly of machinery applicable to the farm and demonstrations were given of the capabilities of the latest threshing machines, manure spreaders and other labor saving devices for the farmer. This was the rendezvous for all who were interested in agricultural operations and it was



Central Canada Exhibition, Ottawa—Exhibit of National Cash Register Co.

political centre of the Dominion, but the importance of the industries which flourish in its midst place it in the front rank of Canadian cities, while its splendid situation and natural beauties draw

success of their efforts. The fair was an unqualified success from first to last and notwithstanding the inclement weather that prevailed during the greater part of the week, the crowds that daily

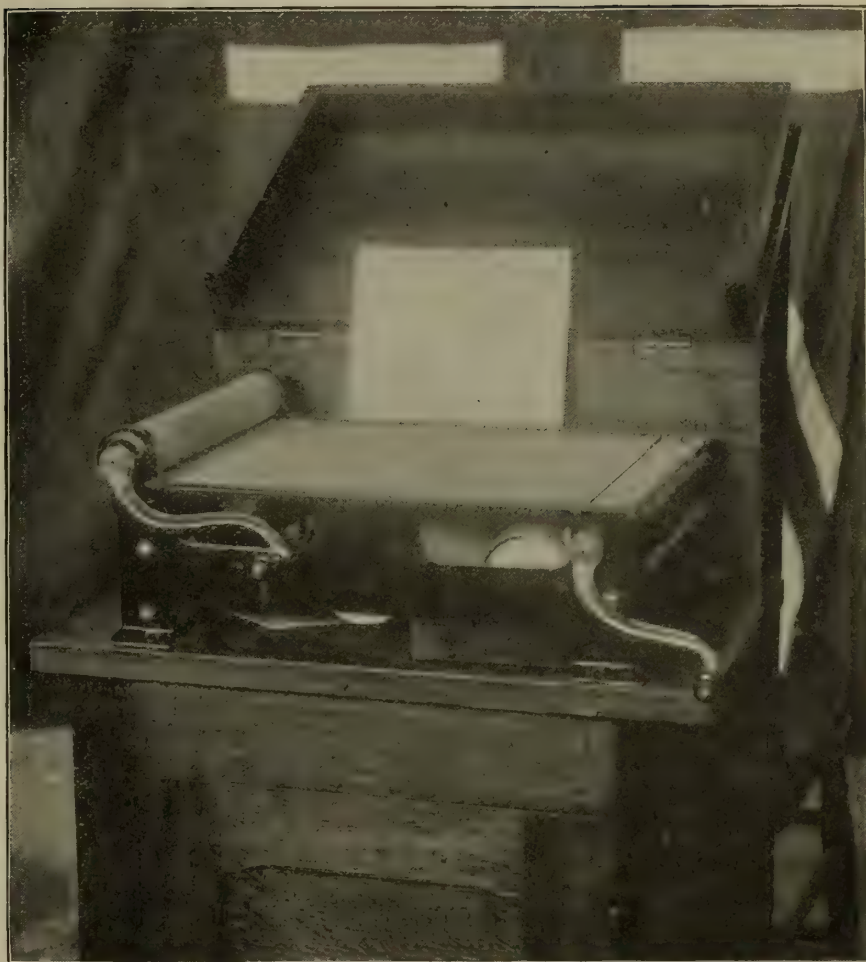
instructive to listen to the critical comments of practical agriculturists on the various types of farming machinery. In the carriage building adjoining the machinery hall an excellent display was made of all that is newest and most up-to-date in carriages. Several large firms were represented and the exhibits were in every way worthy of this important industry.

The Midway.

On the Midway the fun was fast and furious. Everything was there, from Asiatic jugglers to medicine vendors who gave away ten dollar bills with fifty cent remedies, while the strains of "The Good Old Summer Time" mingled with the resounding blows of the hammer, the crack of the rifle and the hoarse cries of the nigger minstrels. Farmer Hodge sat for his portrait at fifteen cents and the deacon stole surreptitious glances at the Parisian beauties and wondered if he dare go in.

National Cash Register Co.

National Cash Registers were again a good drawing card. The exhibit was situated at a corner of the centre aisle and attracted many visitors. Two of the company's leading machines were displayed on stands inside the booth while the other lines were shown on a ledge that ran around the walls of the booth. The multiple drawer machine was the leader and a beautiful piece of mechanism it was. These registers are equipped with as many cash drawers up to nine as there are clerks in the store. The machine is arranged so that each clerk operates his own cash drawer.



Central Canada Exhibition, Ottawa—Exhibit of L. W. Hutchinson & Co., Ottawa.

The merchant knows how much business each man does and what kind; also the particulars of each sale as made. This printed record is made under lock and key.

The exhibit was in charge of Mr. W.

E. Wright, the eastern Ontario sales agent, whose office is at 129 King street west, Toronto. Mr. Wright also has a full line of samples always at the Russell House, Ottawa, and is always glad to show them to anyone who is interested.

J. H. Connor & Son.

An exhibit that attracted much attention, especially from the ladies, was that of J. H. Connor & Son, the Ottawa manufacturers of washing machines and clothes wringers. The washers included such popular lines as the "O. K. Rotary," the "Daisy," the "Capital," the "Famous," the "Ottawa," and the "Connor Improved Washer." The machines had a handsome appearance, being finished with aluminum bronze. In wringers the leaders were the "Favorite" and the "Domestic." Connor & Son guarantee these wringers for five years. The leading feature of these wringers is the rubber rolls, which are made of the very best Para rubber. The next grade in wringers was the three-year guaranteed wringers, the "Challenge" and the "Ottawa." This firm also manufacture the "Royal Canadian" and other makes. Other somewhat dif-



Canada Central Exhibition, Ottawa—Exhibit of J. H. Connor & Son.

ferent lines they are also manufacturing are step ladders, tub stands, wheel barrows, saw horses, and special wood turnings, all of which are distinguished

gallon, and gives a good profit to the dealer. They are also making a strong point of their Universal varnish, which they guarantee to give satisfaction.

the fair. The machine, which is patented, is one that every contractor and builder should have, as the price is within reach of every one in the trade, and its use reduces the cost of construction. The block prepared by this machine permits of perfect ventilation in the walls and consequent absence of moisture. Mr. W. D. McVey, managing director, reported satisfactory business, and the appointment of local sales agents in the important districts of Canada is now receiving his attention. The company's works are located at Queen and Abell streets, Toronto.

Intercolonial Railway Co.

The southeast corner of the main building was occupied by the Intercolonial Railway and a splendid display was made of views of the varied scenery that lies along their line. The effect of the display was greatly enhanced by a number of fine caribou heads from Newfoundland. The exhibit was in charge of Mr. A. E. Barton, of the advertising department, Moncton, who was most attentive to visitors and at all times ready to give any information concerning the line.

The I.C.R. trains from Montreal make direct connections with the steamers of the Reid Newfoundland Co. at North Sydney. In addition to their splendid train—the Maritime Express—



Central Canada Exhibition, Ottawa—Exhibit of Capital Boat Works.

by the care and finish that characterize all Connor & Son's work.

Capital Boat Works.

An excellent display of canoes and boats was made by the Capital Boat Works. The predominant feature was racing and war canoes, which attracted great attention. This firm now hold a splendid record in the matter of racing events. Among prominent racing events their canoes hold the championship of America at the A. C. A., the Trophy Cup at the A. C. A., and the single and tandem championships of Canada, and also the half mile war canoe championship of Canada. Their canoes have won the tandem racer championship of Canada in 1900, 1901, 1902 and 1903, the tandem racer championship A. C. A. 1900, 1903 and 1904; the singles (Canada) 1900, 1902, 1903 and 1904, and the A. C. A. 1902 and 1904. The double racer, C. C. A., 1900 and 1902, were also won by their canoes.

Ramsay's Paints.

The exhibit of Ramsay's paints was striking and unique. It occupied a corner at one of the side entrances to the main building, and took the form of a collection of model frame houses side by side with a grass plot in front. The houses were, of course, painted with Ramsay's paint. The background consisted of a canvas screen on which was painted an excellent landscape which gave a splendid setting to the whole picture.

Ramsay & Son are making a specialty of outside paint which retails for \$1 a

M. J. Wilson & Sons.

M. J. Wilson & Sons, carriage manufacturers, had an excellent display in the main building. A full line of saddlery and harness was shown. The exhibit evoked much favorable comment.



Central Canada Exhibition, Ottawa—Display of Ramsay's Paints.

The Cement Stone and Building Co., Limited.

The Cement Stone & Building Co., Limited, Toronto, exhibited some of their Hollow Block Cement Machines at

the I.C.R. have inaugurated a new service between Montreal, Halifax and St. John. This is Canada's new train—the Ocean Limited—which leaves Montreal daily except Saturday, at 7.30 p.m.

Through sleeping cars, Montreal to Halifax and St. John are provided. The G.T.R. day express from Toronto makes direct connection at Montreal. Only one night is spent on the road for Moncton, St. John, P. E. Island, New Glasgow and Halifax.

While the passenger service of the I. C.R. is equal to that of any railway in America, this railway also gives an excellent freight service from Montreal to points east along its line, fast freight trains running between Montreal, St. John and Halifax. Shippers of goods from Montreal and points west, and also to Montreal and points west, will find in the I.C.R. a service which is of the best.

Page Wire Fence.

The Page Wire Fence Co. had an excellent exhibit in the grounds, and a constant stream of visitors examined their various wire products. In the foreground was a triangular enclosure fenced with their style No. 3 lawn fence which has proved a great success. The firm are greatly pleased with the way in which this fence has taken hold of the popular favor. Out of the total sales of the year not a single complaint has been received, which goes to prove that it is a fence that can be thoroughly depended on. There was also shown a solid steel frame gate of very artistic appearance, which is used for general purposes and is particularly appropriate for garden or lawn use. The headquarters of the company are at Walkerville, Ont., with branch offices at Montreal, St. John, N. B., and Winnipeg.



Central Canada Exhibition, Ottawa—Exhibit of Page Wire Fence Co.

Hugh Carson, Limited.

A display of saddlery and harness that attracted great interest was that of Hugh Carson, Limited, of Ottawa. The exhibit occupied a large portion of the Carriage Building, and no pains or expense was spared to make it complete and attractive. No fewer than seven model horses were displayed, two pairs and three singles, fully equipped with Carson's elegant harness.

This company's harness and saddlery hardware has now been on the market

for three years and the growth of their business has been phenomenal. They are now employing between 60 and 70 hands in their handsome factory on Rideau street, which was greatly enlarged a short time ago. The company contemplate a still further enlargement of their factory owing to the rapid growth of the business. The head of the company, Mr. Hugh Carson, is the gentleman whose fame as a lacrosse player of seven or eight years ago was known all over the American continent. The company have lately got out a handsome new catalogue, which they will be pleased to mail free of charge to any reader of Hardware and Metal on receipt of a postal card.

Quick Easy Loose Sheet Press.

L. W. Hutchinson & Co., of Ottawa, gave a demonstration of their new copying system which is something that has never been seen before in this country. The Quick Easy Loose Sheet Rotary is a new departure, being mechanically different from all other machines for making press copies of business letters, bills, shop orders and all written documents. It is both quick and easy to operate and the firm guarantee it to make better copies and more of them than any other copying press on the market. A postal card or anything written on both sides can be copied at one operation and on one or two sheets as desired. Two letters can be copied at one operation by placing the letters



Central Canada Exhibition, Ottawa—Exhibit of Hugh Carson, Limited.



Central Canada Exhibition, Ottawa—Exhibit of Library Bureau of Canada, Limited.

written sides together with two sheets of moist copying paper between them. The firm allow ten days' free trial of these presses and invite the customer to return the press at their expense if not perfectly satisfactory at the end of the trial period.

Library Bureau of Canada, Limited.

The Library Bureau of Canada, Limited, had every reason to be proud of their splendid exhibit, and certainly the public showed no lack of appreciation as was evident from the constant stream of visitors who asked for information regarding the various lines.

The Library Bureau are the inventors and originators of the card index, the system of vertical filing, and numerous other business systems. The methods of the Library Bureau are thorough and will commend themselves to every business man. They make a complete study of the requirements of the individual business and then equip it with a system that will most fully satisfy those requirements, economy of time and labor (and consequently of expense) being the object in view.

Besides being the inventors of those office systems the Library Bureau make a specialty of the manufacture of all kinds of office furniture and library fittings. Many important banks, newspaper offices and other institutions as well as stores owe the handsome and elegant appearance of their interiors to

the skill and care of the Library Bureau. Appearances count for much in the business world and every dollar invested in that direction will yield a handsome return.

International Portland Cement Co.

A large space in the grounds was occupied by this company, and crowds of people were attracted by the practical demonstration of the manufacture of Portland cement and its application to general construction. The whole process was shown from the placing of the raw material in the machine to its appearance in finished form. The finished article was exhibited in the shape of a wall of loose blocks of cement. The two raw materials (the clay and the rocks) from the property of the com-

pany were shown, and the finished product made in the form of roofing shingles, a cement chimney, and the complete side wall of a house with bay window were features of the exhibit.

During the week about 400 of the stockholders and interested friends visited the factory of the company, now nearing completion at Hull. The factory is equipped with the improved rotary and conveyer system, making it possible to lift the two raw materials from their resting place near the plant, carry them into the factory and through the entire process of manufacture without being touched by hand.

This company is fortunate in having both raw materials lying side by side at the factory site, water power at the extremely low rate of \$15 per horsepower, and shipping facilities both by rail and water from the docks of the company.

Office Specialty Mfg. Co.

This company had a handsome booth where they showed a great variety of office fittings, including roll top desks, typewriter desks, revolving bookcases, vault fittings, etc. Every article was distinguished by a handsome finish.

Telephone City Stoves.

The Telephone City Stoves attracted many visitors, who examined them with great interest. A full line was displayed of the company's various makes, and the exhibit was an entire success, as the stoves were sold almost without exception.

Gowans, Kent & Co.

Gowans, Kent & Co., Toronto, had a sample room on Queen street near the Windsor Hotel in which a large variety of crockery, glass and art vases were displayed. Special lines of cut glass and special samples of English and French high-class china and art goods and an extensive range of German china



Central Canada Exhibition, Ottawa—Exhibit of International Portland Cement Co.

were on view. Mr. Angus Orr, representative, reported good sales and numerous callers at his company's rooms, over 200 visitors and buyers having called. It was an opportunity to the trade to inspect a class of valuable samples not usually carried by travelers.

Dunlop Tire Co.

The Dunlop Tire Co. had a good exhibit in the Carriage Building, and showed a full line of bicycle and carriage tires.

Dominion Belting Co., Limited.

The Dominion Belting Co., Limited, of Hamilton, showed their stitched cotton duck belting in three pyramids, handsomely decorated with maple leaves and Union Jacks.

THE AMERICAN AXE AND TOOL CO

THE handsome and complete "Season 1904-1905" scythe catalogue, just issued by the American Axe & Tool Co., of Glassport, Pa., with Canadian sales offices in the Coristine building, Montreal, recalls to mind the marvellous growth of an industry upon which the progress made in the invention and development of labor saving agricultural machinery seems to have had no detrimental effect.

When the now famous Bloods brand of axes, hatchets, scythes, etc., were first placed on the market, over 80 years ago, the wonderful farming machinery of to-day was not even dreamed of, and Isaiah Blood with his then considered extensive facilities held practically a monopoly of the market, with the modest output of less than 500 dozen scythes a year.

The scythe is far more indispensable to-day to farming interests than ever before, and a faint idea of the industry's progress may be gained by an inspection of the American Axe & Tool Co.'s mammoth factory, No. 17, at Glassport, Pa., where a comparatively small department is exclusively devoted to the average daily production of 300 dozen scythes. Aside from this the plant produces daily 1,000 axes and 750 dozen hatchets, no small percentage of which is the Bloods brand, the balance consisting principally of the "Hubbards Full Concave," "Lippincott," "James-town," "Robert Mann," "Hubbard & Blake," and the original, genuine "Red Ridge."

A tool bearing the stamp of "Blood" and the trade mark of the maker is universally regarded as a standard of merit and the well earned reputation of this brand is amply protected by the process of manufacture and the most rigid system of inspection employed by

the makers in their efforts to maintain its supremacy.

Besides a concise and clear description of the scythes and other agricultural tools made by the American Axe & Tool Co., the new catalogue above referred to contains also artistically colored illustrations, representing the various finishes and patterns, which practically serve the purpose of miniature samples. These the purchaser can at once understand, enabling him to promptly make a selection. The general style of this publication, like all other undertakings in which this company interests itself, was very aptly expressed by Mr. J. Hofmann, their Canadian sales manager, as "the best that can be produced."

By addressing the American Axe & Tool Co., Coristine building, Montreal, and making known your wish for a copy of this catalogue, mentioning Hardware & Metal, your communication will be cheerfully and promptly responded to.

KING EDWARD'S VISIT TO LIVERPOOL.

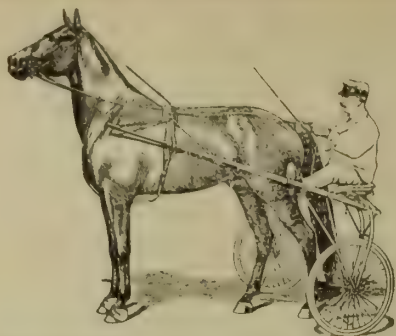
By Wm. H. Evans.

EIGHTEEN years ago on the 12th of May I happened to be in Liverpool when our late beloved Queen Victoria paid a visit to the old town. I had just arrived from New York upon the Cunard steamer "Servia," and there was no time to purchase tickets for a view. However, I worked my way up Water street and managed to climb upon an office window far above the heads of the crowd. From my "coign of vantage" the view of the procession was superb, and when the dear old Queen came along I yelled a hearty "Hurrah!" and flatter myself that I received a direct and personal acknowledgment in the way of a most gracious bow from Her Majesty.

Upon a warm day in July, 1904, thanks to my cousin, Mr. Charles L. Bragger, of Prenton, Mrs. Evans and myself received invitations to splendid seats in Church street, directly opposite St. Peter's Church, to view the royal procession as it passed from the city hall to St. James' Mount, where King Edward, accompanied by his handsome and youthful looking consort, Alexandra, and a brilliant retinue, was to lay the corner stone of the new Liverpool cathedral. During the waiting time a band discoursed sweet music, and refreshments were handed round by our host and his fair assistants. The town was en fete and filled to overflowing. The streets were packed by a good-natured orderly crowd. Barricades lined the way and a line of soldiers were on guard at the edge of the sidewalk. At every ten paces a stalwart Liverpool policeman stood. At street intersec-

tions were a couple of trained nurses in their smart uniforms ready to render aid to any who should "fall by the wayside" or get crushed. The ambulance corps were also in evidence. Admirable arrangements prevailed everywhere. The sight of the gorgeous state turn-outs of the King and Queen, Lord Derby, the Earl of Sefton, with their swell equipages, postillions, out-riders, attendants and flunkies with powdered wigs and calves "fearfully and wonderfully made," was a sight long to be remembered, and Edward the Seventh looked every inch a king as he bowed to the plaudits of the assembled multitude.

After the procession had passed we thanked our kind host and wended our way, showing our tickets to the "Bobbies" at the barriers, who promptly allowed us to pass to the Princess Landing Stage, where the Woodside steamer Bidston was in waiting to accompany the royal yacht to sea. We were favored by invitations from the mayor of Birkenhead for this special trip, and the handsome boat was profusely decorated and filled with a gay party of ladies and gentlemen, the former in all their Summer loveliness. A recherche luncheon of light and heavy refreshments was served in the after cabin, and a more bountiful spread would be difficult to imagine. Needless to say the hospitality of the mayor and corporation were heartily appreciated by those whose appetites had been "whetted" by the excitement of the day. But to turn to the river. What a glorious sight greeted one! The scene was indescribably grand. The Mersey was alive with excursion boats, tugs, sailing vessels, great ocean liners, coasters, torpedo boats, battleships, and other craft—a triumphal spectacular display of England's greatness upon the briny deep. In the centre of the "lane" was the King's yacht, the attending vessels acting as satellites and keeping at respectful distance so as to give the royal party a clear view of the good majestic vessels at anchor. In no other port in the world could such a scene be repeated, and amongst the ships in review order was the vessel upon which we had crossed the ocean, the commodore boat of the Canadian Pacific Railway Co.'s Atlantic fleet, the Lake Manitoba, Captain Murray. The Manitoba, resplendent in bunting, presented a handsome appearance and was much admired. The Bidston accompanied the Victoria and Albert until she was away past the Rock Lighthouse, when all the bands upon the different craft struck up "God Save the King," and the whistles screamed farewell. The King, in an admiral's uniform, was plainly seen upon the quarter deck of the yacht, and the royal vessel signalled "good-bye" and passed out to sea.



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Burns Wood Only

Fire-box is extra large as shown by dimensions. Oven is encircled by a complete sheet flue. Ash-pan is large and roomy. Sets $2\frac{1}{2}$ inches from the floor on legs.

The ATLIN RANGE will burn straw or stubble with excellent satisfaction.

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No.	Holes	Size of Oven, Ins.	Size of Wood Fire Box, Ins.	Weight, lbs.	Tel. Code
8	4 8-in.	Bott. $8\frac{1}{2} \times 21 \times 21$	$7 \times 10 \times 21$	165	Cuddle
9	4 9-in.	Rack $9 \times 10 \times 21$	$7 \times 10 \times 21$	165	Cudgel

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CANADIAN MANUFACTURERS' ASSOCIATION.

THE 33rd annual meeting of the Canadian Manufacturers' Association held in Montreal on September 21, 22 and 23, marks another stepping stone in the development of perhaps the most powerful commercial organization in Canada to-day. The aim of the association extends far beyond that for the mere advancement of the interests of its respective members on the assumption that what is good for one is also good in degree for two, and that community of interests is a better policy in the long run than splendid isolation.

This year's convention was largely taken up in the investigation of various problems confronting Canadian industries at the present time, and the consideration of ways and means whereby the manufacturing interests of the country may be improved generally. The

various industries as well as the commercial situation were also thoroughly reviewed and commented upon, all with the one object in view, namely that the Canadian Manufacturers' Association might be in a position to seize upon and work out with the greatest possible expedition those aspects of Canadian trade and commerce which are the most vitally connected with the advancement of Canada as a nation.

The key-note of the convention was admirably struck by the president in his opening address when he spoke of the growing importance of Canada as a nation and suggested that one of the first questions to which Canadians must give thought was the importance of establishing, preserving and developing manufacturing industries in Canada. "At the present time no less than \$520,000,000 is invested in manufacturing in Canada. In 1881 the figures were \$159,000,000. Thus the increase in capital investment during the last twenty years is \$361,000,000. As a nation of producers our first thought must naturally be the profitable marketing of our products. There is one market we can safely take, mould and control for the upbuilding of Canadian interests, the home market which is more permanent more remunerative and yields a higher degree of profit to the individual producer than any other.

"The trade and navigation returns for the year 1904 are ample proof of the need of radical changes in the present Canadian Customs tariff if the desired end is to be brought about. The balance of trade has turned against us to the extent of \$34,763,131. Imports during the same period from the United States increased by \$14,000,000 of which over \$8,850,000 was in dutiable goods that to a large extent could be made in Canada. In view of all this the Canadian Manufacturers' Association have declared strongly in favor of an immediate and thorough revision of the tariff upon lines that will more effectually transfer to the workshops of the Dominion the manufacture of many of the goods which are now imported from other countries.

"While such a tariff should be framed primarily for Canadian interests it should also give a preference to the Mother Country and any other part of the British Empire with which reciprocal trade can be arranged. All this in view of the fact that the two great and practically the only markets available for Canadian products to-day are the home market and those of Great Britain.

"The association therefore is in favor of the British and colonial Governments drawing together and appointing representatives to investigate the question thoroughly and to endeavor to evolve a policy of preferential trade that will bind the United Kingdom and her colonies together in a permanent alliance."

In regard to the labor question the stand was taken that it is in the interest of the Canadian workman and the Canadian employer to work together for the protection of native products and to endeavor to arrive at a mutual understanding that will make for peace between capital and labor and prevent the development of class antagonism in this country.

The question of insurance, which is agitating Canadian business men at the present time particularly those of Montreal and other cities with congested districts was brought up for consideration. As the manufacturers are the largest payers of such insurance it was strongly urged that measures be taken to secure proper adjustment of rates, and finally proposed that an insurance department of the association be organized. The necessary details of such organization were thoroughly threshed out and a scheme presented to the executive as ground work to build upon.

Among other subjects discussed were the "Fast Atlantic steamship service," "transportation," "increased aid to the woollen industry," "bounties," and "reciprocity with the United States," all of which were ably handled and are certain to be more or less moulded and shaped as to their practical outcome by the opinions of the members of such a representative organization as the Canadian Manufacturers' Association.

ACTIVITY IN BUILDING CIRCLES.

DESPITE the general depression throughout Europe and a curtailed market in the United States, business in Canada has this Fall proven to be of larger volume than last year or, in fact, any previous year.

General activity in building operations may be credited in some measure for this condition of affairs. In Winnipeg and Toronto there has been especial activity in building, though the laborers' strike reduced the operations in Toronto considerably. In Montreal, Hamilton and Vancouver, the building operations have also been above the average, as has been the case in the average town in Ontario, Manitoba and the Territories.

A consequence of this activity has been an abnormal demand for building paper, nails, cement, plumbing goods, and other staple goods for this trade.

Some of the building paper manufacturers estimate the increase in the demand for this line to be fully 20 per cent. as compared with last year, a feature of this trade being the popularity of ready roofing which is replacing wooden shingles in many parts of Canada—a development that should be popular with the hardware trade, as shingles was not a hardware line, while ready roofing is essentially so. In Manitoba and the Northwest, according to present estimates, 800 cars of building paper will be used this season, an increase of nearly 50 per cent. over a year ago.

Remarkable expansion in the consumption of cement is another result of the conditions. As mentioned in last week's issue, there are now nine cement plants in operation in Ontario, and four under construction, as well as one in Quebec and one in Manitoba. Last year the production was 695,260 barrels, and the importations 734,882 barrels, Belgium, Great Britain, United States and Germany contributing in the order named. This year the pressure of imported cement, chiefly American, has forced prices 30c a barrel lower than a year ago, yet the production of Canadian cement has been much in excess of last year and the consumption has been sufficient to readily absorb the domestic

output as well as the imported supplies.

A factor in this increased demand has been the concrete block, which has won popular approval from the Atlantic to the Pacific and which is, as a result of its popularity, absorbing much cement.

No less conspicuous has been the expansion of the demand for plumbing goods, particularly porcelain enamel ware in recent years. Where cheaper lines, such as steel bath tubs, iron sinks, etc., were acceptable a short while ago, the average buyer insists on an attractive line of enamel ware. The only Canadian manufacturer of this line has found no difficulty in securing a market, though there is still considerable importing, especially in the west.

For such staple lines as paints, glass, nails, etc., the demand has materially exceeded last year, though the strike in Toronto appreciably curtailed the trade in such goods in that city. Outside activity has more than made up for this loss, however.

With generous harvests in Manitoba and the west, as well as throughout older Canada, with a big production in our lumbering and mining camps, and with a heavy year in building operations there is small danger of Canada being seriously affected by depression in the United States, Great Britain or Germany.

AMERICAN CAPITAL IN CANADA.

SOME of the leading newspapers in the United States are calling attention and commenting on the manner in which American capital is being used to develop the resources in Canada instead of being utilized within their own boundaries. The high tariff wall built by their Government for the better protection of their own industries was in many instances aimed at Canada. Under that policy their industries have grown and prospered until they have become in many instances the greatest in the world. The spirit of progress and enterprise has always dominated these great concerns and the word expansion has been their key-note throughout. In seeking in Canada a market for their

overproduction they find that retaliatory measures have been taken by the Canadian Government for the protection of her industries, to such an extent that some of these United States companies cannot profitably market certain classes of goods in Canada when manufactured in their own country.

What is the result? They are now seeing possibilities of which they are not slow to take advantage. They are realizing fully the advantages for an opening for manufacture in this country and are quick to grasp the situation. Almost every week sees the opening up in Canada of a branch of some American concern, who are thus gaining advantage over similar institutions not in a position to do so. As a Chicago paper puts it: "American capital is developing coal mines in the Maritime Provinces. It is building Canadian iron and steel plants, and getting the bounties the Dominion Government pays. It is reported that one American company which builds locomotives, has bought out a small Montreal concern and will enlarge the plant. One of the large American car building corporations is preparing for a plant at Montreal so that it can get Canadian business. These are the fruits of the lack of a reciprocity agreement between the two countries. American capital is creating Canadian industries and giving to Canadians work which might as well be done by American workmen."

This is not a philanthropic movement on the part of the firms mentioned, but a sound business policy. They have weighed the situation and find that in taking such an action they are best serving their own interests. In the meantime Canadians are not averse to, but gladly welcome all sound manufacturing industries, seeking expansion on this side of the line.

A NEW DEVELOPMENT IN THE DUMPING CLAUSE.

A NEW development in the operation of the dumping clause is at present engaging the attention of a section of the Montreal trade. The intention of the framers of this clause seems plain

enough, but in their interpretation of it the customs officials are giving it a meaning which was probably never intended by Mr. Fielding. As understood by the commercial community, the intention of the clause was to prevent the sale of goods in Canada by merchants and manufacturers from other countries at prices less than those prevailing in their own markets. The reading now given to the clause goes much further than this, and in fact it interferes with the ordinary course of trading in merchandise which is of a changing value.

An actual example will show how unjust is this new reading. An importer buys a quantity of goods on the English market and arranges that they shall be delivered in monthly shipments to cover the wants of his customers in Canada. The goods are bought at the fair market price prevailing in England and published in the daily papers. Before all deliveries are made the English market price advances and the customs appraisers find that goods are being invoiced at less than the published prices of the day. This, they contend, is "dumping" and, entirely disregarding the fact that the goods were bought months before at the fair market value then prevailing, they assess the importer with all the penalties provided by the "dumping" clause.

Nor is this ruling merely one of the vagaries of the customs officials; the attention of the Customs Department has been called to it and the Minister of Customs has confirmed it.

Surely this was not the intention of the framers of the Act, for this reading imposes a penalty on the far-sighted merchant who knows enough of the condition of a market to buy when prices are low. In the actual instance above referred to the goods were bought at the fair market prices. The importer is a shrewd judge of this particular market and he bought when he saw prices had fallen as low as they would go. In this, there is no "dumping," but merely the exercise of shrewd business insight. The regulation will prevent importers from buying or selling forward, for if a market happens to advance the increase goes into the coffers of the Canadian Government. This is surely legislation running wild and legislation which is an entirely unnecessary interference with legitimate trade.

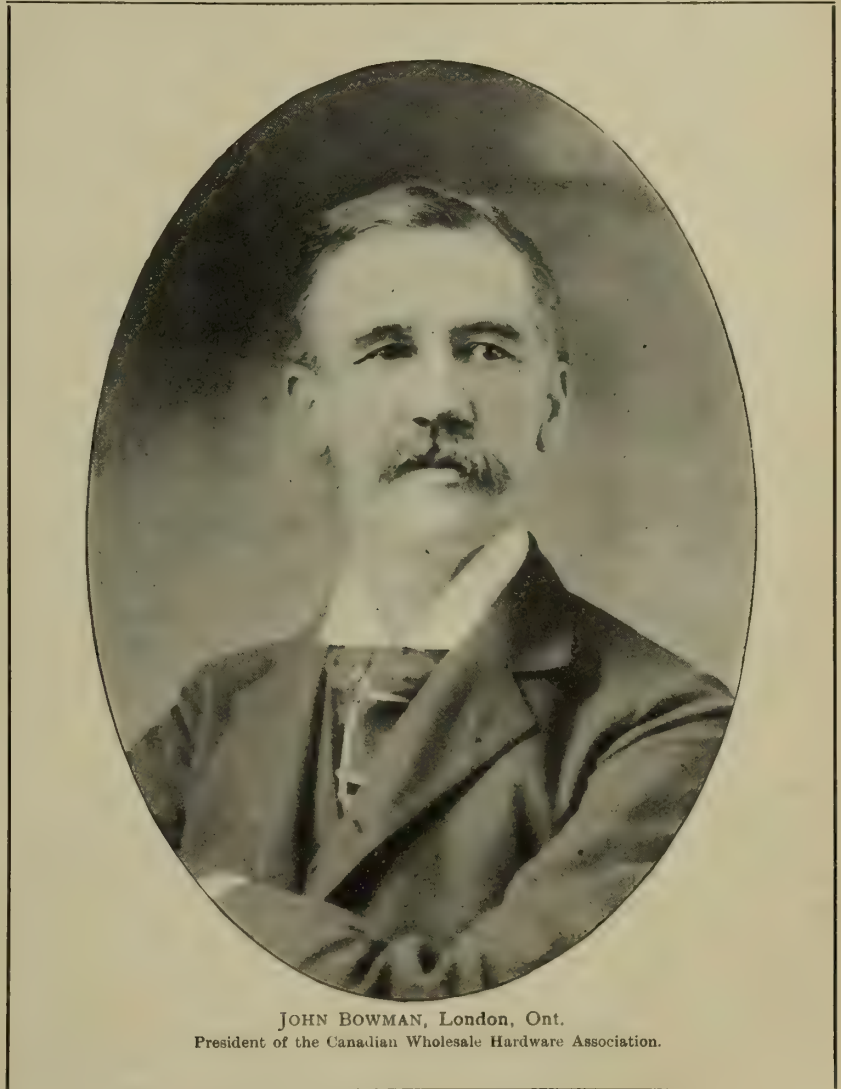
PRESIDENT JOHN BOWMAN.

CONSCIENTIOUS application to business, combined with a large measure of native ability, has won for John Bowman, of the John Bowman Hardware & Coal Co., London, Ont., a wide place of honor and respect in hardware circles throughout Canada, as well as with all classes of business men in London.

At the age of sixteen Mr. Bowman

left the Hope Co. and returned to London, Ont., and entered the coal business, shipping by rail and vessel to all Canadian ports. This business steadily expanded, and in 1887 hardware was added, and the firm of Bowman, Kennedy & Co. established, which firm continued until 1897, when it was dissolved and the John Bowman Hardware & Coal Co. established.

President Bowman is a man who com-



JOHN BOWMAN, London, Ont.
President of the Canadian Wholesale Hardware Association.

left school to enter the employment of T. & J. Thompson, wholesale and retail hardware dealers, of London. His work there brought him into full touch with the intricate details of a hardware business, and ten years later, when he entered the employ of Adam Hope & Co., Hamilton, he had already won recognition as a capable hardwareman.

After seven years of valuable experience in the metal business Mr. Bowman

mands general respect for his personal qualities. Though a keen business man he is conscientious and thorough-going to a fault, and his influence is ever on the side of any good cause. He has been honored in London by the presidency of the Board of Trade of that city, and also of the London Y. M. C. A. His fellow wholesale hardwaremen last year elected him vice-president of the Canadian Wholesale Hardware Association, and this year advanced him to the presidency of that influential organization.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,

232 McGill Street,

Montreal, Sept. 29, 1904.

Hardware.

FAVORABLE harvest weather in west is having a very stimulating effect on the hardware trade. Now that a good crop is assured, business prospects have brightened considerably. Travelers are just beginning to cover the ground there and already a large volume of business is reported. While trade has opened up in a somewhat better manner than last week it is still a little behind the volume of last year.

No decided change has taken place in prices. A revision of American ammunition lists has led to a slight reduction in all lines, amounting to about 5 per cent. There is considerable activity in building paper which at this season of the year is in good demand. Sleigh bells, skates and lanterns are the most active lines this week, while the season for weather strips and draught tubing has commenced in an active manner.

Food Choppers—These continue in active demand. We quote, smallest size \$1.05 each net; medium family size \$1.20 each net; large family size \$1.35 each net.

Corn Cutters and Huskers—The season for these is still on and a lively demand is reported. We quote as follows: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Agricultural Wrenches—There is a fair amount of business being done in agricultural wrenches at present. Prices continue as follows: 6 in., \$2.85 a dozen 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Grindstones—A fair amount of business is reported this week. Our quotations are as follows: 40 to 200 lbs., 2 in., and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in. thick and over, \$1.20; 11-2 in. thick and under 2 in., \$1.30.

Skates—The skate season has commenced and this is one of the most active lines at present, a large number of orders being reported from all quarters.

Our quotations are as follows: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50 nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concaved \$1.60 a pair.

Lanterns—A brisk trade is being done. We quote: Cold Blast, \$7 a dozen; No. 0 Safety, \$4 a dozen.

Sleigh Bells—Sleigh bells are in good demand and an unusually active market is reported. We quote: Brass team bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

Shovels—The snow shovel season is now on and a very active trade is being done, particularly in the rural districts; the city trade in these has not yet commenced. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Washing Machines—This market is quiet. Our quotations are as follows: Round (three legs) \$35 per doz.; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Heavy Screw Hooks and Hinges—Not much of a trade is being done in this line. We quote: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—Business is reported very good, being considerably better than last week. We quote \$2.25 per hundred pounds.

Barb Wire—The demand for barb wire is not at all brisk but a fair amount of business is reported. We quote as follows: \$2.75 per 100 lbs, f.o.b. Montreal, and \$2.50 f. o. b. Cleveland.

Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

Galvanized Wire—Merely a nominal trade being done. There is no change in price. We quote: In earlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In earlots f.o.b. Cleveland, Nos. 6, 7 8 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—Very little activity is noticed in fence staples this week. Prices continue as before. We quote as follows: \$2.65 per hundred lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—A fair amount of business is passing. The discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Screws—The usual demand for screws has been experienced this week with no unusual feature to the market. The supply is still none too large. Discounts are: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—There is a good demand for bolts and nuts at the present time, this line being now more active than for some time past. We quote as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all

sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—An early settlement of the wire nail situation is assured. Meanwhile cutting continues in all directions. We quote nominal prices as before, \$2.40 per keg in car lots, \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Cut Nails—Cut nails are still quoted at their former price. The demand being not at all brisk. Quotations are: \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Pressed Spikes—Large contracts and railroad work are calling for considerable quantities. Discount remains as before, 25 per cent.

Horseshoes—These are moving well at the present time, numerous orders for considerable quantities being received. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—There is a good demand. Our quotations on list price: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. Other brands 55 and 57 1-2 per cent off list.

Shot Guns and Rifles—Nothing unusual has been experienced in this market during the past week. The demand continues fairly good. Prices remain the same and are to be had on application.

Ammunition—Business is lively. A revision of American manufacturers lists has caused a slight reduction from the former lists, amounting to about 5 per cent. We quote: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand.

Shot—As is usual at this time of the year, there is a big demand for all sizes.

We quote as follows: Standard, \$6.50 per hundred lbs.; chilled, \$7 per hundred lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Roofing Pitch—A fair amount of business is reported this week. Price remains as before, \$1 per cwt.

Building Paper—There is a good demand for building paper at the present time, country trade being very good indeed. At this season of the year there is a good demand for this line in the rural districts, used in repairing old buildings. Our quotations are as follows: Tarrde felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—Merely a nominal amount of business. Prices remain as before. We make the following quotations: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement—The cement business has brightened a little within the past week, and dealers are more sanguine of an active Fall trade, although it has been slow in opening up. We quote: English, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel, ex store; and American, \$2.15 to \$2.35, ex cars.

Coil Chain—There is no great demand for coil chain at present. Prices remain the same but the market continues weak. Our quotations are as follows: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-3 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on earlots.

METALS.

The metal market during the past week has been somewhat less active than formerly. There is a slight lull and less life in metals than a week ago. Bar iron is more active and considerable

galvanized iron, black sheets, tin plates, and Canada plates are moving. Copper, tin, and lead are all very firm and early advances are expected. Scrap metals continue quiet, with little change, except an advance of \$1 per ton in wrought iron. There is no other noted change in price.

Pig Iron—Less activity is experienced in pig iron this week than last. Prices remain unchanged. We quote:

"Disc," No. 1.....	\$17.50 delivered Montreal
"Dom.," No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 " "
Glengarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.00 delivered Montreal.
(special).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.00 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "

Bar Iron—Larger orders have been received for bar iron within the past week and large quantities are being shipped by boat to eastern and western ports. Prices remain unchanged. Our quotations are as follows: Merchants' bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

Tool Steel—There is less demand for tool steel, although fair business is still being done. We quote as follows: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Merchant Steel—The market is somewhat quiet during the present week, and little business reported. We quote: Sleighshoe, \$1.77 1-2; tire, \$1.87 1-2; Spring, \$2.75; toe calk, \$2.37 1-2; machinery (iron finish), \$1.97 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.77 1-2; rivet, \$1.82 1-2.

Canada Plates—A large volume of trade has been done in Canada plates within the last week. The market is weak, but no change in price is noted. We quote as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—There is a lively demand with no change in price, although there is a downward tendency. Our quotations are as follows: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge,

\$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—A large amount of galvanized iron is moving at the present time. The market is firm and very active. No change in prices. Our quotations are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95. In less than case lots, 25c extra.

Sheet Zinc—A fair demand has been experienced, the market remains unchanged. We quote case lots \$6.25 to \$6.50 and small quantities \$6.50 to \$6.75.

Tin Plates—Prices quoted on these are firmly maintained, with no shading whatever. We quote: Cokes, \$3.75; charcoal, \$4.

Ingot Tin—The market is very firm with indications of an early advance. There is little stock moving. Quotations are: 30 1-2 to 31c and are firmly maintained.

Ingot Copper—The advance of one-quarter cent per pound noted last week still holds and there is every likelihood of a further rise. We quote: 13 3-4 to 14c the former price being for large quantities only.

Ingot Zinc—The market is steady and the demand merely nominal. We quote 5 3-4 to 6c.

Pig Lead—The market is quiet. Prices are firm with an upward tendency, but there has been no change. We quote: \$3.25 to \$3.35.

Scrap Metal and Old Materials—Business in these lines has not picked up to any great extent. There is little stock moving. The change in price of \$1 per ton is noted in No. 1 wrought. An advance in old rubbers has taken place, they are now quoted at 5c a lb. We quote: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$11; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 5c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,

10 Front Street E.

Toronto, Sept. 30, 1904.

Hardware.

JUDGING from the volume of business being done by the jobbers in strictly Fall lines retailers must be finding a lively demand for seasonable goods. Winter lines are also moving more freely. Prices show no change but there is a stiffening feeling in many lines. Iron and steel is strengthening and an advance is prophesied in some such lines as screws, wire and nails. There is still some cutting in the latter line, however, a condition that seems unreasonable in the face of the conditions.

Lawn Mowers—There is not much doing. Prices for next season are steady as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discounts 50 per cent. with freight concessions in quantity shipments.

Guns and Ammunition—A good demand for guns and ammunition has been experienced, but is practically over and retailers are getting their stock in shape for the deer hunting season. The price of ammunition has stiffened as a result of the anti-dumping clause.

Washing Machines—A fair trade is doing. Prices are unchanged. Our quotations are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Chain—There is a fair demand for this line. We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Barb Wire—The trade is beginning to manifest some interest in the line for next season. We quote as follows: \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—A limited trade is reported. Our quotations are as fol-

lows: No. 5, \$3.45; Nos. 6, 7 and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4, Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Not much doing now, but there is some interest in prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—Nominally prices remain unchanged at \$2.45 per keg f.o.b. Toronto, with car loads at \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are: "C" brands, 40 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—The market is firm, some of the trade anticipating higher prices. We make the following quotations: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—A good business is being done at steady prices. Our quotations are as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—The market is steadier, there being much less disposition to making concessions. We quote: Carriage bolts, common, (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and

PORTLAND CEMENT

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GERMAN and BELGIAN.

FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.

SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

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Deseronto Iron Co.

LIMITED

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Manufacturers of

CHARCOAL Pig Iron

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

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Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—Our quotations are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sash cord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—The demand still keeps increasing. Trade is brisk and sales are far ahead of any previous record. The principal demand seems to be centred on two and three ply roofing, and sales are almost double that of last year. Prices remain the same and will do so until the semi-annual meeting of the association in December. The outlook is for a record breaking season in this line. Prices quoted by us are as follows: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Firebrick—During the week the demand has strengthened and trade to-day is brisker than a week ago. Prices still remain unchanged and are likely to do so for some time. Our quotations on prices are as follows: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Cement—During the week large amounts of American cement have been dumped on the local market. Very large orders of Canadian and American Portland have been sold as low as \$1.65, but for the general run of orders prices remain the same. Demand is strong and trade is brisk. The outlook is for a record-breaking season in this line of business. Prices quoted by us are as follows: Canadian Portland \$1.70 to \$2; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex store; American Portland, \$1.70 to \$2 f.o.b. Toronto.

Tinned Sheets Tinplates Canada Plates Polished Sheets

ETC., ETC.

FROM STOCK OR FOR IMPORT.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

Anti-Freezing Pumps

will soon be in demand.
You ought to lay in a stock of our

Standard
Anti-Freezing Pumps

before the cold weather sets in.

They are the best line you can handle because your customers will be perfectly satisfied when they find their pumps will work on a zero morning.



Write for catalog and prices

THE R. McDOUGALL CO., LIMITED
Galt, Ont.

"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel

for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

SHEFFIELD, ENG.

Agents for Ontario:

BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

METALS.

The feature of the situation is the stiffening of the iron and steel market in sympathy with the stronger tone in the United States market. Tin, copper and sheet metals generally are unchanged at steady figures. The volume of business continues in excess of the records of former years.

Pig Iron—The market is in an improved condition. The Canadian blast furnaces are all working full capacity and are not having difficulty in disposing of their stocks. We quote:

Midland, f.o.b., Toronto.....	\$18 70
Hamilton, No. 1.....	\$17 50 to 18 00
" No. 2.....	17 00 to 17 20
" No. 1, Hamilton.....	16 25 to 16 55
Midland, No. 1.....	17 00 to 18 00
" No. 2.....	17 00 to 17 25
" No. 1 f.o.b. Midland.....	16 25 to 16 75
Radnor, f.o.b. furnaces.....	27 50
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—The market has strengthened until now an advance of 5c over last week's quotations is general. We now quote as follows: \$1.80 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—A large trade is doing in steel, the improvement in the demand for tool steel being particularly noticeable. We quote: Morton's "Self Hardening," 50c; "Alpha," 65c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—A good business continues at steady prices. We quote from 30 to 31c.

Galvanized Sheets—A good steady movement is reported. Prices are steady. We quote as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tin Plates—An excellent demand continues, with prices steady. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—The market continues to move upward. A good trade is doing. We quote in ton lots as follows: Ingot

Clearing Sale

—OF—

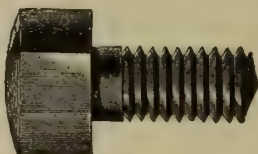
Fencings and Nettings.

Our remaining stock is FOR SALE at VERY LOW prices. Having disposed of our weaving machines, we are closing up the business of this company.

This is the LAST CHANCE to obtain a supply of the best nettings ever offered on the Canadian market.

We will be pleased to quote you prices, etc., on application.

THE ONTARIO WIRE FENCING CO., Limited, PICTON, ONT.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.

GAS AND BURNER PLYERS



B. & S. Pattern Slip Joint, forged from Tool Steel.

Send for Gas Plyer section of the Green Book of Hardware Specialties.

Utica Drop Forge & Tool Co.

Mfrs. of Nippers and Plyers.

296 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL, ALLEN C. JENKING, Canadian Manager.



B. & S. Pattern Slip Joint, forged from Tool Steel.

Send for Gas Plyer section of the Green Book of Hardware Specialties.

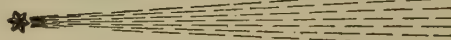
Smith & Hemenway Co.,

Mfrs. of Cutters and Hardware Specialties

296 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL, ALLEN C. JENKING, Canadian Manager.

GILBERTSON'S



COMET

ALEXANDER GIBB, Agent,

Brand Galvanized Sheets

are guaranteed by the makers. You run no risk. They cost less than some other brands but you get equal quality.

W. GILBERTSON & CO., Limited, Makers, Pontardawe, South Wales.

MONTREAL.



THEY ARE NOT ALL ALIKE

Our Stove Lining is so good that it is sold on a "money back if not right" basis.

Sterne's Asbestos Stove Lining

is plastic and is a great improvement upon the old style of fire brick. It is less costly.

Send for descriptive circular.

G. F. STERNE & SON, Sole Makers, - BRANTFORD, ONT.

J. H. HANSON, Eastern Agent, - 422 St. Paul St., Montreal.



This design a guarantee of quality

WATERPROOF WRAPPING PAPER

For Express and Long Distance Packages Put up in rolls 36 in. wide, 250 and 300 yards in a roll. Clean paper on both sides—waterproof substance in the centre—therefore it will not soil or stain delicate goods as ordinary waterproof paper will. Practically odorless. May be used either for case lining or wrapping packages.

CANADA PAPER CO.

SAMPLES AND PRICES WITH PLEASURE.

TORONTO LIMITED MONTREAL

copper, \$13.25 to \$13.50, and sheet copper \$20 per 100 lbs.

Brass—This market is more active this week. Discounts are steady at 15 per cent.

Lead—A steady trade continues. We quote: \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—There has been a falling off in demand during the week. Prices are from 53-4c to 6c per lb.

Solder—This market has picked up and is active. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Old Material—Reports state that there is a good demand for old rubbers and during the week price advanced 1-4 cent per lb. The price of lead remains the same and in all probability will do so for some time, although this article is very scarce at present. Iron is moving more freely. Dealers are looking forward to a better market after the elections. The market to-day has a better appearance than a week ago and with the exception of "old rubbers" the price list remains unchanged. We quote: Heavy copper and wire 101-4c per lb.; light copper, 91-2c per lb.; heavy red brass 91-4c per lb.; heavy yellow brass, 7 to 71-2c lb.; light brass, 5 to 51-2c per pound; tea lead, \$2.20 per 100 lbs; heavy lead \$2.40 to \$2.50 per 100 lbs.; scrap zinc, 31-4c per lb.; iron, No. 1 wrought, \$7 to \$9; No. 2 wrought, \$2; machinery cast scrap, \$10 to \$12; stoveplate, \$7 to \$9; malleable and steel, \$4; old rubbers 5c per lb.; country mixed rags, 65c per 100 lbs.

PETROLEUM.

Trade continues to be the same. Prices are still the same, but there is every probability of a change in a week or so, as the busiest season in this material is just beginning. Since last quotations we have added to our list prices on crude. We quote the following prices: Refined Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 18 1-2c ex warehouse; crude, Pennsylvania, \$1.56; Lima, \$1.05; Canadian, \$1.53.

Hides, Tallow, Skins and Wool.

During the week under review lamb skins and shearlings have each advanced 5c, caused by growth of animals, thus making the skins older, larger and more expensive.

Auction sales are being held in London, England. These auctions take place four times a year and rule the markets of the world. There is a lia-

bility of a change in prices after present sales are over. With the exception of the two above mentioned articles prices remain unchanged. Our quotations are as follows:

HIDES

No. 1 green steers, per lb.	0 69
No. 2 " " " "	0 08
No. 1 green, per lb.	0 08 1/2
No. 2 " " " "	0 07 1/2

CALFSKINS.

Veal skins, No. 1, 6 to 12 lb. inclusive	0 10
" " " " 15 to 20 lb "	0 08
" " " " 2 " "	0 09
Lamb skins	0 07
Shearlings	0 70

TALLOW.

Rendered Tallow, per lb.	04 1/2 0 04 1/2
--------------------------	-----------------

WOOL.

Unwashed wool, per lb.	0 11 1/2 0 13
Fleece wool, new clip, per lb.	0 20 0 21
Pulled wool, super, per lb.	0 20 0 22
" " extra	0 21 0 23

LONDON METAL MARKET.

From the Metal Market Report, September 23, 1904.

Pig Iron—Scotch warrants, Glasgow, closed at £50 3s, unchanged; Middleboro, No. 3, foundry, at £43, a reduction of 1s 6d in the week.

Tin—Spot tin opened firm at £128, futures at £128 10s, and after sales of 270 tons of spot and 170 tons of futures, closed easy at £127 15s for spot and £128 5s for futures, making price as compared with a week ago an advance of £1 on both spot and futures.

Copper—Spot copper opened firm at £58 7s 6d, futures at £58 7s 6d, and after sales of 150 tons of spot and 250 tons of futures, closed quiet at £58 7s 6d for spot and £58 7s 6d for futures, making price 5s higher than a week ago on both spot and futures.

Lead—The market closed at £11 17s 6d, making price the same as a week ago.

Spelter—The market closed at £22 5s, a reduction of £1 15s in the week.

PERSONAL MENTION.

Mr. D. J. Macnab, hardware merchant, Lanark, Ont., was married a few days ago to Miss Helen Dodds, daughter of T. J. Dodds, Almonte. Hardware and Metal extends greetings.

Mr. H. Gervan, who has lately purchased the hardware business of Mr. C. B. Reeves, has his stock arranged very tastefully and will no doubt receive a fair percentage of the trade. He intends putting in a tinsmith and plumbing department in connection with his business in the near future.—Chilliwaik Progress.

Mr. Alex. Charlesworth has purchased the hardware business of Mr. Chas. Greb, Zurich, and will take possession on the 19th. We are pleased to learn



Eastlake
Steel Shingles

either Galvanized or Painted

Are Always They are more economically durable and quicker to apply than any others, fitting accurately—and therefore most easily laid.

Reliable

They have been thoroughly tested in all kinds of climates, invariably proving **Fire, Lightning, Rust and Weather Proof.**

If you're building, make sure of satisfaction by ordering **EASTLAKES** for the roof—fullest information if you write.

Metallic Roofing Co., Limited,
WHOLESALE MFRS., TORONTO, CANADA.

that although Mr. Charlesworth has joined the ranks of Zurich's enterprising business men, he will not move from our hustling suburb of Egmondville. The Zurich business will be looked after principally by Mr. Leo Charlesworth. We can recommend this new firm to the good people of Zurich.—Huron Expositor.

INTERESTING CENSUS FIGURES..

MR. ARCHIBALD BLUE, census commissioner, has made public some interesting facts concerning Canadian industries. He shows that in the agricultural industry, including agriculture proper, dairying and the wood industry, Canada has invested \$1,787,102,630. The value of agricultural products he shows to be \$443,940,995 or nearly twenty-five per cent. on the capital invested. In fisheries, the capital aggregates \$11,208,564, and with a product of \$19,768,449 the fisheries are paying a percentage of 176. For agriculture, including forest products, the average value of the products per capita is \$77. An interesting comparison, instituted by Mr. Blue, shows that in the United States the agricultural production per head is valued at only \$62.

In manufacturing industries, employing five hands and over, \$446,916,487 are invested, and the value of the product is \$481,053,375, or 107.6 per cent. of the total capital. The capital and products of the dairy industry are included in these figures. The per capita production of Canadian manufacturing industries is consequently \$90, while in the United States it is \$170.

Merrick, Anderson & Co.

NORTHWEST DISTRIBUTORS

WINNIPEG.

"Hot Blast"

Line for Coal.

For Soft, Hard or Lignite Coal, Coke, Etc.

Made by the D. Moore Company,
of Hamilton.



Heavy draw
centre
shaking
grate and
lining.
Heavy or-
namental
legs and
base.

For
Soft Coal
Hard Coal
Lignite
Slack, etc.

STRATHCONA HOT BLAST

KNOWN EVERYWHERE.

MANITOBA DEPOT

Merrick, Anderson & Co.

117 Bannatyne St. East, - Winnipeg.



STRATHCONA DOUBLE HEATER

No.	Diameter of Body.	Approximate Shipping Weight.
1115	15 inches.	134 pounds.
1118	18 "	174 "

FOR the past few weeks the unsettled condition of the weather which has been general throughout the Northwest, and has held in check threshing operations to a great extent, has at last given way to a burst of sunshine. The markets continue very active but firm, with practically little or no change of any account. We quote:

Barbed wire, 100 lb.....	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
" No. 2 and larger.....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91
Annealed wires (uncoiled) 100c. less.	
Horseshoes, iron, No. 0 to No. 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 20
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Horsenails, No. 4—1½ in., list price.....	0 48
" 5—2.....	0 32
" 6—2½.....	0 28
" 7—2½.....	0 24
" 8—2¾.....	0 22
" 9—2½.....	0 20
" 10—2½.....	0 20
" 11—2½.....	0 20
" 12—2½.....	0 20
" 14—3½.....	0 20

Discount on these prices 40, 10, 7½ per cent., plus 15c. per box.

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in. 4 10	1½ in.....4 10
3d 1½ in.....3 75	1¾ in.....3 70
4d 1½ in.....3 50	1½ in.....3 50
5d 1½ in.....3 50	1¾ in.....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2½ in.....3 25	2½ ".....3 25
10d 3 in.....3 20	3 ".....3 20
20d 4 in.....3 15	3½ ".....3 15
30d 4½ in.....3 10	4 ".....3 10
40d 5 in.....3 10	4½ ".....3 10
50d 5½ in.....3 10	5 ".....3 10
60d 6 in.....3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.....	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10
Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	
Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28.....	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	

Office of HARDWARE AND METAL

Room 308 McIntyre Block,

Winnipeg, Sept. 26, 1904.

Genuine Russian, per lb.....	11
Imitation ".....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05
Finplate, 1C charcoal, 20 x 28, box....	9 50
" IX.....	11 50
" IXX.....	13 50
Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50
Pig lead, 100 lb.....	5 00
Black iron pipe, ¾ inch.....	.....
" ¾ ".....	2 80
" ¾ ".....	3 25
Black iron pipe, ¾ inch.....	4 20
" 1 ".....	5 85
" 1½ ".....	8 20
" 1½ ".....	10 00
" 2 ".....	14 00
Rope, sisal, 7-16 and larger, basis.....	.....
Manila, 7-16 and larger, basis.....	15 25
Lathyrum.....	11 25
Solder.....	20
Axes, chopping.....	\$ 6 75 to 12 00
" double bitts.....	12 00 to 18 00
Bluestone.....	5 25
Screws, flat head, iron, bright.....	85 and 10 p.c.
Round ".....	80 p.c.
Flat " brass.....	75 and 10 p.c.
Round ".....	70 and 10 p.c.
Coach ".....	70 p.c.
Bolts, carriage, ¾ or smaller.....	60 and 5 p.c.
" 7-16 and up.....	55 p.c.
Bolts, machine, ¾ and under.....	55 and 5 p.c.
" 7-16 and over.....	55 p.c.
Bolts, tire.....	60 and 5 p.c.
Bolt ends.....	55 and 5 p.c.
Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	55 and 5 p.c.
Square nuts, case lots.....	3c. discount.
" small lots.....	2½ c.
Hex " case lots.....	3c.
" smaller lots.....	2½ c.
Rivets, iron.....	50 and 10 p.c.
Copper, No. 8.....	32
No. 12.....	36
Coil chain, 3-16 inch.....	9½
" ¾ inch.....	7½
" 5-16 inch.....	5½
" ¾ inch.....	5½
" 7-16 inch.....	4½
" ¾ inch.....	4½
" ¾ and ¾ inch.....	4
Spades and shovels.....	40 and 5 p.c.
Harvest tools.....	60 p.c.
Axe handles, turned, s.g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60
Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.
Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½ c.
" tarred.....	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00
Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 55
Powder, F.F., keg.....	4 70
F.F.G.....	5 00
Tinware, pressed, retinned.....	70 and 10 p.c.
plain.....	75 and 2½ p.c.
" pieced.....	.....
Japanned ware.....	37½ p.c.

Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American	27½c
Prime white American.....	25½c
Water white Canadian.....	25½c
Prime white Canadian.....	24½c

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap.....	5
Copper (heavy).....	8½c. per lb.
Yellow brass (heavy).....	7½c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2½c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead.....	\$5 00 to \$5 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½
Turpentine, pure, in barrels.....	\$ 0 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
Boiled	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine.....	0 29
" " extra engine.....	0 27
" " dynamo.....	0 35
" " black.....	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	

Harness oil.....	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure.....	1 00½
" 2nd pressure.....	1 09½

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special Correspondence of **HARDWARE AND METAL.**

Vancouver, B. C., Sept. 23, 1904.

THERE has been another party of prominent railway officials in Vancouver this week, and contractors and others interested are looking forward to some construction. Those here yesterday were J. D. Farrell, assistant to the president, J. J. Hill, of the Great Northern, and manager of the steamship lines; R. I. Warrington, second vice-president; F. E. Ward, general manager; J. C. Eden, assistant general traffic manager, and S. G. Yerkes, general western passenger agent. Mr. Eden has just returned from an extensive trip through the Similkameen, and was met there by the other officials. To-day Mr. Ward and Mr. Warrington left to take in the same trip. C. H. Wolf, geologist of the Granby smelter, is in the Similkameen, and when it is remembered that J. J. Hill has a great eye for ore tonnage, and creates it wherever possible, there may be some connection in all these trips. Mr. Wolf has been asking people who have eligible smelter sites what their prices are, and is looking up properties which are worth developing. Mr. Ward went so far as to state that while there was nothing for publication this trip there would be something good the next time he was on the coast. Those interested in the large coal areas of the Nicola

and Similkameen think the trip of these men just at this juncture is very auspicious. It is the third railway party in less than three weeks, the prominent officials of three of the great northern railway lines having been in this city.

* * *

Mr. C. M. Beecher, vice-president of the B. C. Mills, Timber & Trading Co., has returned from a trip as far east as Moosejaw, and the news he brings back in regard to the lumber industry is not very encouraging. "The millmen of the interior are now getting desperate," he said. "It looks as if the only way that a lesson can be taught the Government is by means of disaster, and I think, unless all signs fail, there will be plenty of it in the west before long, in connection with this principal industry. Already there have been failures and three or four fires."

The fleet loading lumber at B. C. mills for export is the smallest in its history. The Olivebank is at Chemainus, and the Harold and Halewood are at the Hastings mill, and only three charters are in sight, the William H. Talbot, the Admiral Tegethoff, and the Balboa.

In Vancouver the members of the B. C. Lumber and Shingle Manufacturers' Association have not adhered to the rules of the association and the organization's price list, but instead have gone cutting with the result that figures are from 25 per cent. to 40 per cent. lower than a month ago. The new mill of the Canadian Pacific Lumber Co. could be ready for cutting in six weeks, but it will not be operated until Spring because of the condition of the market. The depression is certainly getting worse, and will be very bad before Spring.

* * *

Premier L. J. Tweedie, of New Brunswick, arrived in the city last night from the east, and announces that English capital will be invested in the properties on Princess Royal Island, in which he and other prominent New Brunswick people are interested. The development of the claims will be proceeded with on a much larger scale. The properties are good ones, with a heavy percentage of gold in the ore. His son, Mr. F. M. Tweedie, is manager.

The Kamloops Coal Co. has increased its capital, and will devote the extra money to increased development.

The concentrator of the Iron Mask gold mine at Kamloops has been working since the first of the month, and has proven very satisfactory. These industries will create great activity in this town.

* * *

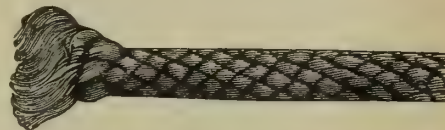
The contract for 3,500 piles, to be used in the construction of the founda-

tion of the new C. P. R. hotel at Victoria, has been let to Mr. Ward, of that city. A contract for 10,000 barrels of cement will also be let this week.

Nine hundred thousand dollars worth of debentures are to be issued by the Stave Lake Power Co., the proceeds to be used in the development of the water power of Stave River Falls, 36 miles from Vancouver. The man at the head of this is Mr. John Hendry, president of the V. W. & Y., and when the power is available it is stated that besides being used for industrial purposes, it will be applied to operate the cars on the V. W. & Y. between this city and New Westminster, and the Great Northern lines on the Fraser River delta.

The British steamer Inverness, which brought a cargo of sugar to the refinery here, will load three hundred cars of rails and material at Tacoma for Korea. The material will be used in

Buy the Best.

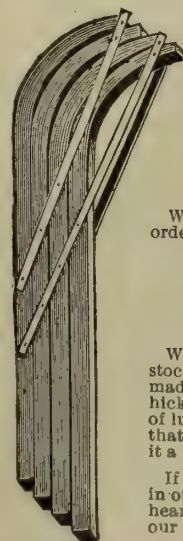


HERCULES

Sash Cord.

Star Brand Cotton Rope
Star Brand Cotton Clothes Lines
Star Brand Cotton Twine

For Sale by all Wholesale Dealers.



The Sarnia Hub, Spoke and Bent Goods Mfg. Co.

Sarnia, Ontario

We are prepared to fill any orders for

Heavy Waggon,
Sleigh,
Buggy, and
Cutter Stock

We make a specialty of heavy stock and can fill orders promptly made from the best of oak and hickory as we carry a large stock of lumber and can make any sizes that may be required. We make it a point to fill orders promptly.

If you are in need of anything in our line we will be pleased to hear from you and we will give it our prompt attention.

Bob Sleigh and
Long Runners

J. S. Loughead & Son
Sarnia Ontario

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion.	1 year.....	\$30 00
" " " "	6 months.....	17 00
" " " "	3 months.....	10 00
50 " " " "	1 year.....	17 00
" " " "	6 months.....	10 00
25 " " " "	1 year.....	10 00

SITUATIONS VACANT.

WANTED—Man well posted on paints, brushes and ammunition for Western Canada, to take charge of these lines for jobbing firm. Good opening for a hustler. Apply Box 174, **HARDWARE AND METAL**, Toronto. (42)

MECHANICS WANTED.

STOVE Plate Moulders wanted. A few first-class men. The William Buck Stove Co., Limited, Brantford. f

STOVE Plate Moulders. We want steady men at once. Clare Bros. & Co., Limited, Preston, Ont. f

FIRST-CLASS Plumber. One preferred that understands hot water and steam heating. Steady work to a good workman. Robert Paddon, Windsor, Ont. (40)

WOODWORKER—To work on sleighs. State experience and wages. J. E. Clipsham & Sons, Gravenhurst, Ont. f

TINSMITHS—For general work. Apply, stating wages, G. A. Binns, Newmarket. f

PAINTERS wanted. Two good brush hands on finishing house work. State wages. William Collins, Shelburne, Ont f

PLUMBER—First-class. Also a good steam fitter. Apply at once, stating wages and experience. A. R. Dundas, Cobourg. f

HARDWARE Clerk wanted at once. One year's experience. State salary. P. C. McMaster, Havelock. f

BUSINESS CHANCES.

A VERY desirable and successful business; stock about \$7,000, principally hardware; situated in the busiest centre of the town; largely cash trade and in splendid running order; the premises can be bought or rented; established since 1837; proprietor retiring only reason for selling. For further particulars address F. J. Wilson & Co., Buckingham, Que. (41)

FOR SALE. Established hardware business in the village of Arthur. Stock about \$2,000. Brick store—good stand—rent reasonable. Ill-health reason for selling. C. M. Irwin, Arthur, Ont. f

STEAM Saw Mill, Lumber Dock and Dwelling House in New Ontario for sale. A snap for quick sale to close partnership. E. Owen, Richard's Landing. f

FOR SALE—Blacksmith stand on Yonge street. Doing good trade shoeing and jobbing. For particulars apply James Childs, Eglinton. f

finishing the construction of the railway from Seoul to Wiju, which the Korean Government began, but which the Japanese Government will finish for military purposes.

Local staples in hardware are unchanged, and the prices for wire nails and barbed wire which have been reduced in the east, are the same here.

W. M. Clark and J. D. Wells, who have come down from the Bulkley Valley, tell of the development of coal claims and copper-gold properties in that district. They say that with good prospecting some very good ground should be found, especially on Bob Creek.

J. Taylor, formerly of Peterboro, has gone east after disposing of the interests of the Arrowhead Lumber Co., in which he was the principal stockholder. The purchasers were the McMillan Bros., the Canada Northern contractors, and with the timber limits, etc., the price was between \$275,000 and \$300,000.

THE PITTSBURG METAL MARKET.

From the Iron Trade Review, Sept. 29, 1904

Pig Iron—The heavy buying of iron on the part of the foundries, would indicate that more work has come into their shops and a revival of the foundry trade, which has suffered probably more than any other branch of the iron industry is hoped for and anticipated. Many of the foundries in this district that have not bought iron in six months have covered to the end of the year during the past week, and in every instance the consumer has orders on his books for which the iron was purchased. The Bessemer iron market, however, continues quiet, apart from a sale of 5,000 tons for delivery the last three months. With its increased pig iron producing capacity, much of which has become available in the past six months, the United States Steel Corporation does not promise to become a buyer in the Bessemer market until demand is far above the present even exceeding the demand during the boom years. Fully half of the independent Bessemer iron producing capacity in the Valleys continues idle and the outlook for an early resumption is far from bright. As a result of the recent buying, No. 2 foundry iron is pretty well established on the basis of \$12.60 to \$12.70, Pittsburg, and it is doubtful if forge iron can be had below \$12. Southern producers are almost a unit in asking \$9.50 Birmingham, and despite the great difference in price between the latter and Northern, a considerable tonnage of the Southern product was sold in this market re-

cently. We revise quotations as follows:

Bessemer, Valley	\$11 85 to \$12 00
Bessemer, Pittsburg.....	12 70 to 12 85
No. 1 Foundry.....	13 00 to 13 25
No. 2 Foundry.....	12 60 to 12 70
Gray forge, Pittsburg.....	11 85 to 12 00
Chilled basic, Valley	11 65 to 11 75
Chilled basic, Pittsburg....	12 50 to 12 60

Steel—The reduction in the prices of billets, sheet and tin bars has not yet stimulated buying, although the manufacturers are attempting to impress on the trade that bottom has been reached and that lower prices if looked for will not be realized. The Republic Iron and Steel Co., although it has just awarded the contract for its sheet and tin bar mill, and does not expect to become a producer until next Spring, has already taken contracts from several independent producers for their requirements. We make the following quotations: Bessemer and open-hearth billets, 4x4 inches and slabs, up to and including 0.25 carbon, \$19.50 f.o.b. mill, Pittsburg, Wheeling or Youngstown, with actual freight added to point of delivery from Pittsburg; 0.26 and including 0.60 carbon \$1 advance; 0.61 to 1.00 carbon \$2 advance. Billets smaller than 4x4 inches \$2 advance; sheet and tin bars \$2 advance. Bessemer and open-hearth rods are held at \$25 to \$25.50.

Structural Material—The structural mills in this district are now operating at a greater capacity than at any previous time this year, contractors pushing the mills for shipment of material before Winter sets in. The large orders placed recently have nearly all been placed in the hands of the mills, the structural shops being anxious to turn out as much of this work the remainder of the year as possible. We make the following quotations: Beams and channels, up to 15 inches, 1.40c; over 15 inches, 1.50c; angles, 3x2 up to 6x6, 1.40c; zees, 1.30c; tees, 1.45c; angles, from 3 to 16 inches, 1.40c; universal and sheared plates, 6 1/4 to 24 inches inclusive, 1.30c; over 24 inches, 1.40c base.

Bars—Specifications on contracts for steel bars placed earlier in the year are heavy, the agricultural implement manufacturers in the west ordering large tonnages to fill out their depleted stocks. The eastern bar iron producers have established a new basing price at 1.30c, Pittsburg, for the eastern trade, although practically all the local business is being placed on the basis of 1.25c. We make the following quotations: Bar iron, 1.25c to 1.30c, Pittsburg; hoops, 1.55c,

and bands 1.35c, both taking bar extras. Bessemer and open-hearth steel bars, 1.30c; plow and cultivator beams, 1.30c, net; channels, angles, zees and tees, under 3 inches, 1.40c; the following differentials are maintained on steel: Less than 2,000 pounds of a size and not less than 1,000 pounds, 10 cents advance; less than 1,000 pounds of a size, 30 cents advance.

Wire and Wire Nails—Practically no shading on wire products and nails is reported in this market, although general cutting continues to be reported from the west. Jobbers are being induced to lay in heavy stocks, and are doing so, at the low prices that are being made as an inducement. We make the following quotations: Wire nails, jobbers' carload lots, \$1.60; retailers' carloads, \$1.65, and less than carloads, \$1.75; painted barb wire, \$1.75 to jobbers in carloads; retailers' carloads, \$1.80, and less than carloads, \$1.90, with 30 cents for galvanizing. Annealed smooth fence wire is held at \$1.45, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburg, 60 days, with 2 per cent. discount for cash in ten days. Iron and steel-cut nails are held at \$1.65 to \$1.70.

Merchant Steel—Demand for shafting, while fair, is by no means as great as the mills would desire and none of the plants are operating near their full capacity. Until there is an increase in new construction, and more buying of machinery, the shafting manufacturers are not anticipating any great increase in demand. We make the following quotations: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.50c to 1.55c; plow steel, 6 inches and under, 1.35c for Bessemer and open-hearth; plow slabs, 1-4 inch and heavier, 1.60c. Drawn and cold rolled shafting is held at 52 per cent. off in carload lots and 47 off in less than carload lots.

Pipes and Tubes—Several large orders for line pipe for gas lines are pending and will be closed before the end of the week. Demand for merchant pipe is light, and shading continues to be reported. Discounts to consumers, carload lots, f.o.b. Pittsburg, plus freight to destination according to Tube Rate book, are as follows:

	STEEL.		IRON.	
	Black.	Galv.	Black.	Galv.
½ and ¾ inch.....	71	55	69	53
¾ and 1 inch.....	75	63	73	61
1 to 6 inches.....	79	69	77½	67½
7 to 12 inches.....	74	59	72½	57

Extra Strong Plain Ends.			
¾ to 1 inches.....	64	52	62
1 to 1½ inches.....	71	59	69
1½ to 2 inches.....	67	55	65
Double extra strong plain ends, ½ to 8 inches.....	60	49	58

MERCHANT BOILER TUBES, LESS CARLOADS, 22 FEET AND UNDER.

	Steel.	Iron.
1 to 1½ inch.....	48	43
1½ to 2½ inches.....	60	43
2½ inches.....	62	48
2½ to 5 inches.....	68	55
6 to 13 inches.....	60	43

Coke—Demand for foundry coke is better, but low prices continue to prevail. Several interests in the old Connellsville region are offering their product as low as \$1.65, and many of the plants are selling at \$1.75. There is little buying of furnace coke, practically all of the independent interest having covered several months ago for deliveries extending through the last half. Strictly Connellsville furnace coke continues to be held on the basis of 1.35c to 1.40c. During the week ending September 17, the production of the upper Connellsville region amounted to 209,791 tons and the lower region produced 60,470 tons. There are now about 6,800 ovens idle in the two regions as compared with over 11,000 early in August.

THE WORLD'S COAL PRODUCTION.

THE total known coal production of the world (exclusive of brown coal or lignite) has now reached the gigantic quantity of 790,000,000 tons, according to the British Board of Trade report for 1902 and 1903.

The United States stands at the head of the list, producing rather less than a third of the total, and the United Kingdom ranks second with a little less than one-third.

Our output has been steadily increasing. In 1885 it was a little more than 159,000,000 tons; in 1897 it reached for the first time 200,000,000 tons, and last year the total was 230,334,000 tons.

Germany, our great commercial rival, takes third place among the coal-producing countries of the world; and her annual output has more than doubled in twenty years.

It does not follow from the fact that we are drawing upon our coalfields to a larger extent each year that the money value of this great national asset shows corresponding increase. The reverse is the case. The value of the output in 1902 was £93,521,000; but although the production in the next year was three and a quarter million tons more, the total value fell to £88,288,000.

For 1901 the average value of British coal per ton at the collieries was 9s 4 3-4d; next year it fell by 1s 2d per ton, and last year there was a further fall of 7d per ton.

We exported last year almost 60,000,000 tons, which exceeded the output of the previous year by 3,400,000 tons. Great Britain is a long way in front as the chief coal-exporting country.

Half the consumption of Canada is derived from the United States but, with the exception of the Cape of Good Hope, the remainder of the British coal producing colonies are principally self-supporting.

ROSS—CORSTON.

AMONG September's matrimonial events the wedding celebrated at the residence of Mr. W. Taylor, 95 Murdoch Street, yesterday at twelve o'clock was one of absorbing interest to an unusually wide circle of friends, when Mr. Allan J. Ross, the well known hardware merchant, was united in marriage to Miss Margaret S. Corston. The drawing room of the residence was beautified for the occasion by a profuse arrangement of flowers including chrysanthemums, roses, ferns, palms and vines that radiated from a back-ground at the western end of the room where the ceremony was pronounced. The bride was given away by her father, Mr. W. Taylor, the president of the Taylor & Pringle Company, Limited, and as the wedding party entered the wedding march, Lohengrin Bridal Chorus (Wagner) was played in the most accomplished style by Miss Lena Taylor. The bride was attended by her sister, Miss Stella Corston. Mr. J. R. Sloane of the Bank of Hamilton staff, Brantford, acted as groomsmen and the wedding ceremony was pronounced by Rev. R. J. McAlpine, M.A., pastor of Knox church. A wedding dejeuner of unusual excellence followed the customary exchange of congratulations. The toast to the bride and host by Rev. R. J. McAlpine, elicited very witty and appropriate replies from the groom, Mr. Sloane and Mr. W. Taylor. The presents were so numerous that a special room had to be devoted to them. They included beautiful and valuable pieces of cut glass, sets of silver and china, bric-a-brac and costly cabinets. Not the least appreciated was a cheque for five hundred dollars from the bride's father, a cabinet of pearl cutlery from the employes of Mr. Ross.—Owen Sound Times, Sept. 23rd, 1904.

PAINT, OIL AND BRUSH TRADES

The German Glass Industry.

From Kuhlows German Trade Review.

THE demand for polished plate glass has considerably slowed up during the closing months of 1902. Owing to low prices of Belgian plate glass offers, the German plate glass syndicate was compelled to reduce prices to an equal extent in order to hold domestic trade. In January and February, 1903 the German syndicate sought to control domestic trade by offering a rebate to jobbers in consideration of their contracting to buy their glass exclusively from the syndicate's central sales agency. Their efforts failed, since it was deemed impossible to comply with counter requirements of the jobbers, and the result was that a portion of the latter ordered their glass from Belgian factories from where they had inducing offers, and as a result imports of Belgian plate increased despite the high duty imposed by Germany on foreign glass. Then the German syndicate made a stiff reduction in prices which was promptly met by Belgian manufacturers. Concessions being made to the jobbers an understanding was finally reached whereby jobbers were induced to order domestic plate. Prices, however, remained low, because Belgian factories kept constantly making low price offers. Then an attempt was made to bring about a working agreement between the German and Belgian plate glass syndicates by which a standard price should be established and maintained, but this effort failed, and the Germans, in December, 1903, radically reduced prices so as to keep jobbers from buying Belgian glass. Altogether prices have been reduced 40 per cent. and jobbers are now complaining that domestic manufacturers are selling direct to dealers and contractors, this course having been resorted to because no reasonable agreement could be reached with them to handle glass of German manufacture exclusively.

In thin rough plate the demand has greatly declined. Instead thereof, wire glass is increasingly used, but owing to domestic competition of rival factories, prices in this specialty have considerably dropped. Mutual losses led to a

combination of the German manufacturers in October, 1903, and an advance of 25 per cent. in prices was agreed on. Whether or not this advance can be maintained the future course of trade must be left to determine.

Demand for Lithium.

A RECENT United States Government report states that in the early part of 1903 there was a small demand for the lithium minerals, but toward the close of the year there was more call for these minerals, and, if this demand continues, the production of 1904 should be considerably greater than that of 1903. A number of individuals who produced no lithium in 1903 began mining in 1904, owing to orders received from abroad. As the uses of lithia are limited, there could readily be an overproduction of the crude minerals; but if the cost could be reduced, so that they might be used in the manufacture of lithium carbonate or

nitrate for red fire in pyrotechnics, there would be an increased demand for these lithium minerals. It has been estimated that there are about 55,000 pounds of lithium salts used in the United States each year, of which usually about one-third are imported. In 1903 these imports amounted to 5,596 pounds, valued at \$3,669

A. Ramsay & Son Company.

The business heretofore conducted under the name of A. Ramsay & Son will in future be carried on under the name and style of A. Ramsay & Son Company. A joint stock company has been formed with A. Ramsay as president of the new company and E. Dowsley secretary-treasurer. This business was established in 1842 by the late Alex. Ramsay and from a small beginning it has grown and extended so that at the present time its trade reaches all parts of the Dominion, Great Britain, our sister colonies and foreign countries.



Good News and Bad News Travel Rapidly

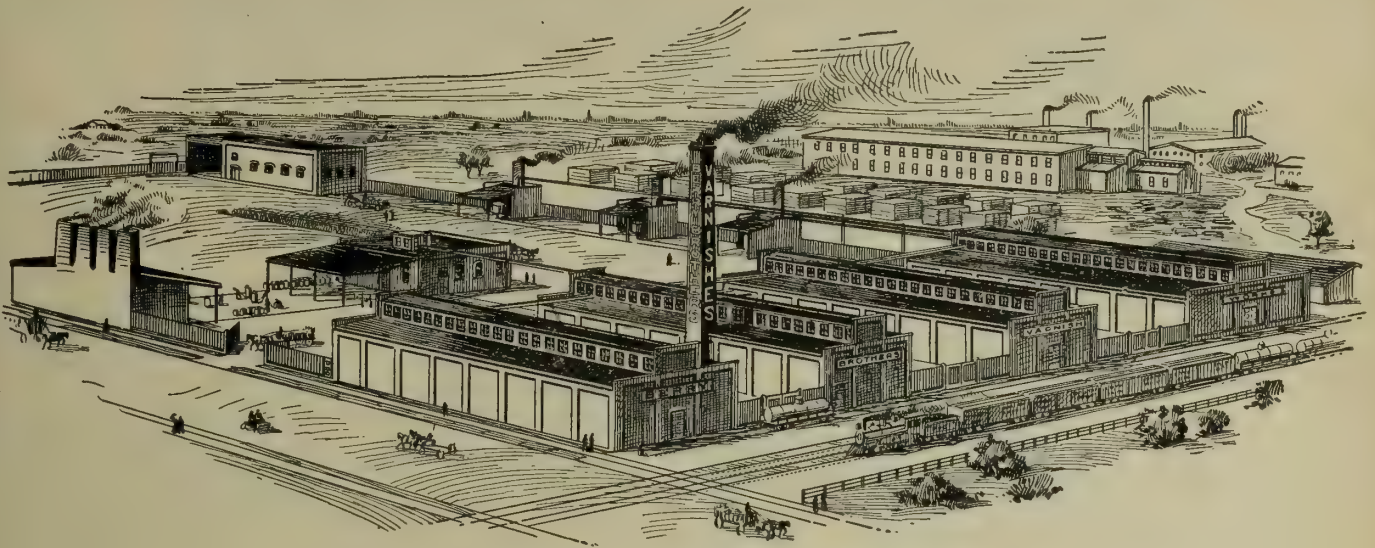
Is it good or bad news that is in circulation about the paint you handle? You need have no fear if you sell **HOLLYWOOD**, for it would be impossible to improve on the good words that are said about it by painters and consumers in general.

HOLLYWOOD PASTE, Ready Mixed and Floor Paints.

They wear on the job, not off it.

WRITE US FOR PARTICULARS.

The Imperial Varnish & Color Co.
LIMITED,
TORONTO, ONTARIO, CANADA.



IT IS NEARLY
HALF A CENTURY

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

Berry Brothers
 LIMITED
 WALKERVILLE, ONT.



Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Sept. 29, 1904.

A STEADY and fairly good business in paint and oil has been maintained for the past week in spite of climatic conditions. With the arrival of better weather, decided improvement is expected, as the paint business in rural districts more than almost any other is sensible to changes in the weather. The demand for putty is unusually large. All lines continue steady with no change whatever in prices.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1, 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Turpentine—Single barrels, 81 1-2c per gallon; two to four barrels, 80 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs. The above prices are net 30 days; for longer terms prices are higher. The market is firm.

Linseed Oil—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure White, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in whole-sale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Sept. 30, 1904.

A N excellent demand for turpentine, oil, white lead and putty is reported. Sundries are also moving fairly well. Prices throughout are unchanged as follows:

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed

oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

St. John.

The season of consumption of burning oil is here. Advance sales have been large. The lower prices quoted some weeks ago have not changed. Paint oils, while firm, are unchanged, there is but a fair sale. Lubricating oils, while unchanged, show a light movement. So far receipts of cod oil have been light. The high prices of last year have given way to much lower figures.

Window Glass.

MONTREAL.

While prices have as yet remained unchanged, an advance in the near future seems imminent. The prospect of such an advance has increased the demand so that the market is extremely active. The situation in the Old Country remains the same so there is now no doubt whatever of a shortage for the coming season. Our quotations are as follows: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount for diamond glass is 25 per cent. and for double thick, 40 per cent. Diamond star or double thick, first break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

Business continues active, both locally and throughout the country. We quote: Star first break, at \$3.80 per 100 feet, and Double Diamond, first break, at

If You Buy

Varnishes	Paints
Japans	Colors
Lacquers	Glues
Stains	Bronzes
Fillers	Chamois
	Sponges

WRITE TO

R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.



The Wearing of the Green

depends upon the kind of green used.

Wise painters, looking for brilliancy, covering power, economy and longest wear, prefer

LUCAS

Imperial French Green

Shrewd dealers always keep it in stock, knowing "the painter who knows," will come back again.

Send for particulars

JOHN LUCAS & CO.

PHILADELPHIA

NEW YORK

CHICAGO

McArthur, Corneille & Co., Montreal.

PENNOLINE

W. W. AMERICAN OIL has no equal.

Write for prices to any of the following branches:

Toronto, Ont.	-	-	St. John, N.B.
Hamilton, Ont.	-	-	Halifax, N.S.
Winnipeg, Man.	-	-	Montreal, Que.
Vancouver, B.C.	-	-	Petrolea, Ont.

CANADIAN OIL COMPANY, Limited

T. H. HAMILTON, General Manager

Cor. Front and Scott Sts., TORONTO

THE CANADA PAINT CO.

LIMITED

THE LARGEST MAKERS OF VARNISHES,
PAINTS AND COLORS IN THE DOMINION.

WORKS AT MONTREAL AND TORONTO.

GRAPHITE MINES, NEW BRUNSWICK.

OXIDE MINES, ST. MALO, QUE

FOR SALE BY THE LEADING HARDWARE AND PAINT
HOUSES OF CANADA:



THE Dry Colors manufactured by the Canada Paint Company.
THE Canadian Oxide Paint mined by the Canada Paint Company.
THE Snow White Zinc manufactured by the Canada Paint Company.
THE Diamond Graphite Paint mined by the Canada Paint Company.
THE Carriage Varnishes manufactured by the Canada Paint Company.
THE Ready-Mixed Paints manufactured by the Canada Paint Company.
THE Triple Strength Colors manufactured by the Canada Paint Company.
THE Decorators' Specialties manufactured by the Canada Paint Company.
THE Bridge and Roof Paints manufactured by the Canada Paint Company.
THE Roof and Shingle Stains manufactured by the Canada Paint Company.
THE Brown and Black Japans manufactured by the Canada Paint Company.
THE Graining and Pure Colors manufactured by the Canada Paint Company.
THE Artistic Oxidized Enamels manufactured by the Canada Paint Company.
THE Hard Drying Floor Paints manufactured by the Canada Paint Company.
THE Kalsomine and Wall Tints manufactured by the Canada Paint Company.
THE White and Orange Shellacs manufactured by the Canada Paint Company.
THE Wood Stains, True to Nature, manufactured by the Canada Paint Company.
THE Wagon and Implement Paints manufactured by the Canada Paint Company.
THE Standard Car and Motor Colors manufactured by the Canada Paint Company.
THE White Lead, the Leading Brands, manufactured by the Canada Paint Company.
THE Handy Varnishes, in convenient tins, manufactured by the Canada Paint Company.
SAMPLE COLOR CARDS and all information furnished free by the Canada Paint Company.

THE CANADA PAINT COMPANY, Limited

Head Office :

No. 572 William Street, Montreal.

\$5.06. Discount 15 to 20 per cent.
These prices are shaded on large and
well assorted specifications.

Improvements in Wire Glass Manu-
facture.

NEW machinery for the manufacture of wire glass has made it possible now to make large sheets, whereas in the past it has been impracticable to manufacture this glass only in small size to have it absolutely satisfactory. The largest size manufactured under the improved method is 60x140 inches, which is a big pane of glass.

The wire used is the common mesh wire, the meshes being about an inch in diameter. This wire is laid on one of the large tables upon which the molten fluid is poured over it. A heavy roller is rolled over the table, and the glass is worked into the proper thickness. At the same operation the wire is worked into the glass, and when the process is completed, the wire has become evenly imbedded in the glass. When this glass is finished it is possible for a 200-pound man to walk on a piece three-eighths of an inch thick without breaking it, and a stone thrown from a distance of ten feet will not break it. This glass is specially adapted for skylights.

By another process it is possible to manufacture large sheets of prismatic glass, both plain and wired. The old method for the manufacture of prismatic glass was to apply the mould over the whole surface at once after the roller had been applied and the glass was the proper thickness. It was practically impossible to cast a large pane of glass in this manner, for by the time the mould would be applied the end of the glass that was rolled first would be cooled, and the prisms would be uneven. By the new process, a machine containing several moulds has been constructed. These separate moulds are about 3 inches wide, and when the roll is passed over the glass, these moulds are impressed on the glass immediately after the roller has passed a point sufficient to admit lowering the section. By this means the mould is applied to the glass at once, and there is no danger of the glass cooling to such an extent as to affect the application of the die. The prisms can be set at any desired angle, to suit individual requirements, and the prismatic glass can be furnished in the same sizes as any other style that is manufactured.—Paint, Oil and Drug Review.

Mr. J. McLean, of McLean Bros., general merchants, North Wiltshire, P. E. I., has left on a two months trip to the Canadian Northwest and Pacific Coast.



We Can Show Our Teeth

on occasion. We are a rather big concern, and accordingly can quote pretty fine figures. We are in business to make money, but we make money by selling an immense amount of Paints, Oils, Varnishes, etc. We are always glad to quote prices.

RAILWAY COACH and CARRIAGE VARNISHES.

Better send for our catalogue on this extensive line. The best varnishes in Canada are of our making.

Standard Paint & Varnish Co., Limited, Windsor, Ont.

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

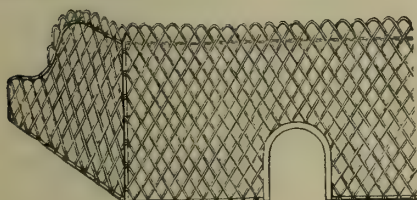
R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



We make all styles of
WIRE AND METAL RAILINGS.
WINDOW GUARDS, ETC.

Send for New Catalogue, No. 8.

DENNIS WIRE & IRON CO.,
LONDON ONT.

McCaskill, Dougall & Co.

Manufacturers



RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

GLUES

of every kind, and for every purpose. Our glues enjoy large sales in almost all countries of the world, and our brands are generally to be seen amongst good stocks of glues. We believe we are giving better value than any other manufacturer, and we want to submit our lines to the Canadian test. Samples gladly sent in reply to enquiries.

GROVE CHEMICAL CO. Ltd, Appley Bridge, Lancashire, Eng.

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

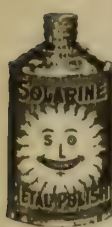
Which can be obtained direct from the works or from the principal Color Dealers in Canada



The Floor Painting Season.

You can sell floor paints in the Fall as well as the Spring. Is your stock of "Island City" floor paints well assorted? Your customers will want them.

P. D. DODS & CO., Montreal, Toronto, Vancouver



SOLARINE

High Grade Liquid
METAL POLISH

There is nothing better and it only needs a trial.

A good line for hardware trade. Solarine is a household necessity. For Ontario, write.

"SOLARINE" POLISHES
Toronto.

Remarkable Speed

Some Metal Polishes are slow and dirty. Not so with

YORK METAL POLISH

which cleans instantly and polishes in the same operation.

Liquid or Paste.

Free Sample on Request.

Anglo-Canadian Supply Co.
91 Wood St., TORONTO.

OAKEY'S The original and only Genuine Preparation for Cleaning Cutlery. 6d. and 1s. Cansisters

'WELLINGTON' KNIFE POLISH

JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

JOHN FORMAN, 644 Craig Street MONTREAL.

THIS IS THE
Downward Light Lamp.

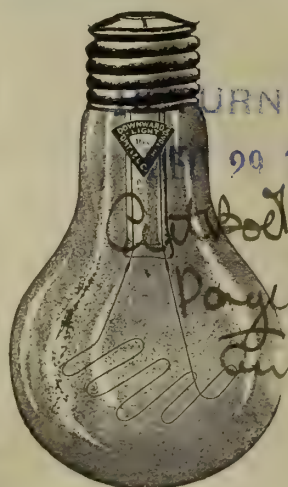
What is Useful Light? The light which is thrown on the table, desk, counter, machine, book, or object, where it is required.

We can easily prove to you that the **DOWNWARD TIPLESS LAMP** is the most economical lamp manufactured to-day. Write for particulars and prices. For sale by all prominent dealers.

MANUFACTURED BY

ONTARIO LANTERN & LAMP CO., Limited HAMILTON, ONT.

WALTER CROSE, Sole Selling Agent, Montreal
We also make the **SHELEY** and **BRILLIANT** Edison Type Lamps.



STOVES AND TINWARE.

Durable Enamel Varnishes.

A TRANSLATION from a foreign contemporary, made for the Oil and Colourman's Journal, gives the following directions for the manufacture of enamel varnishes:

Briclot recommends the subjoined recipes for producing durable enamel varnishes: Matt Enamel: Syrian bitumen, 75 parts; crude phenol (or distillate passing over between 180 and 200 deg. C.), 100; boiled linseed oil, 50; lampblack, 20; petroleum, 80; and "metallic base," 9 parts. Glossy Enamel: Syrian bitumen (glossy), 100 parts; petroleum, 50; spirit of turpentine, 50; linseed oil, 60; stearin black, 4; iron or lead resinate, 20; "metallic base," 4 parts. In the case of the matt varnish, the bitumen and crude phenol are dissolved in the oil at 150 to 200 deg. C., and strained through a sieve. The lampblack, impregnated with benzol, is next added to the warm filtrate, and is followed successively by the petroleum and metallic base. In making the glossy enamel, the stearin black, impregnated with benzol, is triturated with 4 parts of boiled oil, and, after being warmed to about 150 deg. C., is mixed with the oil and turpentine, the metallic base being added last but one, and followed by the addition of the Syrian bitumen in small portions.

The metallic base mentioned in the recipes is an important ingredient, and is prepared by treating two parts each of red and yellow copper scraps with nitric acid until the metal is disintegrated, but not dissolved. The residue is then washed free from acid by the aid of eau de Javel (a solution of bleaching powder). Meanwhile 2½ parts of iron turnings have been treated with sulphuric acid in the same manner as was done with the copper, and the residue is washed with ammonia, followed by water. A thorough washing is necessary in both cases. The two powders are mixed, sifted to remove the coarser particles, impregnated with benzol, and mixed with 3 parts of boiled linseed oil, after which the whole is passed through a mill and packed in a bag of metallic cloth, with a hemp lining. This is placed in a boiler, and exposed to a high temperature, whereupon the metallic composition is absorbed by the oil. If the product is too consistent, it is thinned down with petroleum until it can be filtered through flannel, an operation that is repeated.

The liquid preparation for the glossy varnish is afterwards mixed with a

powder obtained by dissolving 1.40th part of caustic soda and 1-10th part of resin in one part of water, then boiled with 1-40th part of copper sulphate or iron sulphate, cooled, filtered, and dried at 100 deg. C.

To apply these varnishes a coating of the matt varnish is first given, and, after this is dry, the work is gone over with a coat of the glossy varnish, the result being a black lustrous surface. To produce colored effects, three coatings are necessary—the first coat of matt varnish, then a layer of colored varnish, prepared by grinding the desired pigment with benzol, thinning this down with petroleum, and mixing it with some of the "metallic base." The whole is topped with a finishing coat of varnish, consisting of the "metallic base" incorporated with 20 per cent. of Bombay gum.

Are Extending Their Grip.

THE firm of VanTuyl & Fairbank, one of the best known hardware and tinware firms in Western Ontario, are ever on the alert to take advantage of any improvements in mechanical or other appliances whereby the quality of their work may be raised and its completion expedited. So great has been the increase in demand for the product of their tinshop of late that the establishment of a shop in connection with their business at Oil Springs was found necessary, also the equipment of the Petrolea plant with a number of modern appliances. The new machinery of the latter shop has just been installed and comprises a complete line of the most modern tinshop machinery. This plant, under the efficient management of Wm. Cooper, foreman, who has an established reputation as one of the best tinsmiths in these parts, and assisted by a corps of competent mechanics, places this firm in a better position than ever to serve their increasing clientele. —Petrolea Topic.

The Foundation Down.

The foundation of the Galt Down Draft Furnace Co.'s factory on the Jackson property, Galt, Ont., has been completed. It is of cement. Work on the framework is now in progress, and another month will see the building nearing completion.

CUSTOMS BROKERS,
FORWARDING and DISTRIBUTING AGENTS,
FREE AND BONDED STORAGE

TURNBULL & HENDERSON, Vancouver, B.C.



When placing your order for LANTERNS, ask for **WRIGHT'S Cold Blast Lantern**, which is the only genuine Cold Blast Lantern made. They are the best, and we will guarantee prices against all other makers for this season and for next.

E. T. Wright & Co., Manufacturers, Hamilton and Montreal.

The Best Door Closer is . . .
NEWMAN'S INVINCIBLE FLOOR SPRING
Will close a door silently against any pressure of wind. Has many working advantages over the ordinary spring, and has twice the wear. In use throughout Great Britain and the Colonies. Gives perfect satisfaction. Made only by
W. NEWMAN & SONS,
Hospital St., BIRMINGHAM

WORK AND
PRICES
RIGHT
GALVANIZING ONT. WIND
ENGINE & PUMP CO.
TORONTO, ONT. LIMITED.

FULL STOCK
Salt Glazed Vitrified
SEWER PIPE

Double Strength Culvert Pipe
a Specialty.
THE CANADIAN SEWER PIPE CO.
HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

DIAMOND EXTENSION STOVE BACK

They are easily
adjusted and
fitted to a stove
by anyone.

Patented, July 11th, 1893.

Canadian Patent, June 14th, 1894.

Sold by
Jobbers
of - - -

Please your
customers by
supplying them
immediately
with what
they want.



Hardware
Tinware
and
Stoves.

Manufactured by **THE ADAMS COMPANY**, Dubuque, Iowa, U. S. A.

TAYLOR-FORBES CO., Limited, Guelph, Ontario.



"I want
Performance,
Not Looks"

said a horseman
of experience, and
so it is with stoves

**The
Empire
Queen
Range**

does the work required of it perfectly.

It is graceful in appearance, yet lacks the excessive carving that characterizes so many of the stoves nowadays. Its three cardinal features are

ECONOMY EFFICIENCY APPEARANCE

Send for our catalogue and investigate **The Empire Queen Range**.

The
Canadian Heating and Ventilating Co.,
Limited
OWEN SOUND, ONT.

NEW PATENT STABLE FIXTURES



**Galvanized
Steel Watering
Bowl
and
Steel U Bar
Stanchions.**

A profitable line for the trade. These fixtures are easily installed, are very durable, will not get out of order, and as they save one-third of the feed and are a great convenience, every progressive farmer will want them. The demand has already been created and the trade will find it in their interests to carry samples and equip themselves to install systems.

The Metal Shingle and Siding Co.
PRESTON, ONT. LIMITED

Western Agency:
ELLIS & GROGAN,
CALGARY.

Manitoba Agency:
CLARE & BROCKEST,
WINNIPEG.

Montreal Agency:
J. B. DAGENAIS,
953 ST. JAMES ST.

HAVE EXTENDED THEIR FOREIGN TRADE.

THE firm of the Brown, Boggs Co., Limited, manufacturers of metal working machinery, Hamilton, Ont., have always enjoyed the reputation of being a live and progressive company and rightly so, too, for their product can be seen in almost every village in the Dominion from the Atlantic to the Pacific. Nor have they been contented with the Dominion of Canada, for they have gradually worked their way into foreign countries, such as Queensland, Australia, South Africa, South America, etc. Last Spring they decided to more energetically push this branch of their trade and sent their secretary-treasurer, W. E. Blandford, to England and Scotland. Mr. Blandford, after appointing several live agents there, has just returned and reports the outlook to be most favorable. He says the Canadians are well received in England and assigns the cause largely to the part Canada took in the late South

African War and also to the feeling among many of the Britishers of the possibility of Imperial federation at a no distant date.

Mr. Blandford speaks in the highest terms of the Canadian representative at Birmingham, Mr. Peter B. Ball, who gave him all the assistance possible and seemed to be untiring in his efforts to help anyone who claimed to live under the maple leaf. From all accounts Mr. Ball is the right man in the right place. The High Commissioner, Lord Strathcona, and his able and obliging secretary, Mr. Griffith, also came in for much praise by Mr. Blandford, who seemed to be much pleased by the treatment he received from them and recommends all Canadians proposing such a business trip to use the good offices of these obliging gentlemen, feeling assured that they will receive valuable information and much assistance.

Business apparently is not so good

there at the present time as in Canada, but Mr. Blandford is strongly of the opinion that much business can be had by the Canadians in that market providing the price, quality, and finish of the article compare favorably with the English production.

Hardware and Metal wishes this progressive company success and hopes many of the Canadian manufacturers will follow the energetic principals of this company in catering to the export trade instead of allowing our American and German friends to enjoy this trade without interruption.

OSMON, A NEW FUEL.

Osmon, a new fuel, is made from peat, says the U. S. consul at Mainz, Germany. The peat used contains 90 per cent. of water, of which 20 to 25 per cent. is removed by means of an electric current. The peat is then further dried and passed through a machine which breaks it up and forms it into briquettes or nut-shaped pieces. Osmon is free of sulphur, burns without slag or smoke.

GRAND IDEA

The Range that Never Fails.

Permit us to direct your attention to the following points of superiority contained in the Grand Idea Range;

1. Draw-Out Duplex Grates.
2. Vertical Oven Damper.
3. Reliable Oven Indicator.
4. Oven that will bake.
5. Reservoir that will heat.
6. Convenient basting door.
7. Extra deep fire-box.
8. Extra good nickel.

The finish of the Grand Idea Range excels anything yet produced in Canada.

If you are in the market for a range that is a little better than the one you are now handling, it will be to your interests to examine the GRAND IDEA.

GUELPH FOUNDRY CO.

Limited

Guelph, Ont.

Western Representatives:

Messrs. E. G. LOW & CO.,

Winnipeg, Man.



THE "GOOD CHEER"

Art Base Burner

We are again preparing for another big run on this stove, but the demand has exceeded the supply every season so far, so order in good time, and if you have not yet seen this stove get a sample NOW, then follow up quick with your order, and we will see that you get them promptly.



There is nothing
"just as good"
made yet
—nor likely to be.

IT HAS
**NO
FAULTS**

Firepot removable without turning a single bolt.

Has Duplex Grate and large ash pan.

Every stove a Double Heater.

Has Steel Oven.

With or without oven.

The JAMES STEWART MFG. CO., Limited
Woodstock, Ont. and Winnipeg, Man.

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

OFFICERS.

President—Robt. Ross, Toronto.
Vice-President—A. J. Hammond, Winnipeg.
Secretary—J. A. Gordon, Montreal.
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Treasurer—J. K. Wilson, Toronto.
Secretary—W. H. Meredith, Toronto.
Executive Committee—The officers and H. Mahoney, Guelph; S. Mellon, Hamilton, and E. H. Russell, London.

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President—Thos. O'Connell.
Secretary—J. Gordon.

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President—Robert Ross.
Vice-President—Geo. H. Cooper.
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Secretary—T. H. Davies.

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Secretary—J. Thorpe Blyth.

LONDON.

President—B. Noble.
Vice-President—Wm. Smith.
Secretary-Treasurer—E. H. Russell.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Sept. 29, 1904.

ALL building operations are now well under way and many buildings are undergoing alterations, to be completed before the winter sets in. The plumbing season is at its height and the demand for plumbing supplies is very brisk. Manufacturers of heat-

ing apparatus have all they can do to keep ahead with the supply, as many rush orders are coming in, besides a large volume of ordinary trade.

Range Boilers—While new buildings are calling for a large number of these boilers, many orders are being received for boilers to take the place of older installations. Quotations are: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—The demand continues very brisk, with no change whatever. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—A large business in soil pipe and fittings has been done during the past week. Our quotations are as follows: Light soil pipe, 3 to 6 inches, 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe Fittings—As mentioned before, prices are being cut on these goods so that it is impossible to quote with exactitude. The demand continues very good. We quote nominal prices. Discount on all sizes up to six inch 67 1-2 to 70 per cent.

Iron Pipe—This is one of the most active lines in the plumbing supplies market, but there is yet no pretense of maintaining steady prices. Our quotations remain the same. We quote f.o.b. Toronto as follows: Black pipe, 1-8 in., \$1.85 to \$1.95; 1-4 in., \$1.88 to \$2.05; 3-8 in., \$2.04; 1-2 in., \$2.18; 3-4 in., \$2.72; 1 in., \$3.90; 1 1-4 in., \$5.35; 1 1-2 in., \$6.40; 2 in., \$8.55. Galvanized pipe, 1-4 in., \$2.57; 3-8 in., \$2.82; 1-2 in., \$2.98; 3-4 in., \$3.82; 1 in., \$5.48; 1 1-4 in., \$7.48; 1 1-2 in., \$8.28; 2 in., \$11.97.

Solder—There is a lively demand at the present time. The market is firm

with indications of an advance. Bar solder is quoted at 17 1-2c and wire at 18c.

Soldering Irons—There is no change in this market. Prices are as follows: 1 to 1 1-2 lbs. 37c per lb; 2 lbs and over, 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Sept. 30, 1904.

THERE is an excellent trade doing throughout the country. In fact the total volume of business is now larger than at this time last year. The trade in Toronto is keen, particularly in the east end of the city. Prices are fairly steady, though there is still considerable cutting in iron pipe. Some corrections are noted this week in iron pipe fittings.

Lead Pipe—A good trade continues at steady prices. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—A good demand is noted, with prices steady. Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—An improvement in the demand is noted. Prices are steady. We quote nominally: Malleable fittings 20 per cent for American and 35 per cent. for Canadian; cast iron (standard), 65 per cent.; headers, 55 per cent.; flanged unions, 60 per cent.; malleable bushings, 57 1-2 per cent.; nipples up to 6 inch inclusive, 67 1-2 per cent.

Copper Range Boilers—A fairly good trade is being done, affected to some extent by the general slackness prevailing. Discounts at 15 per cent. continue on the new prices issued some time ago.

Iron Pipe—Competition in this line continues again keenly. There is more business being done but at less profit to the jobbers.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.



Just to introduce to you one of those money-making lines in the paint business

Ramsay's Rubber Roof Paint

made by special process, with strong elastic qualities, and a great paint to preserve the farmers' barns, outhouses, fences, etc.

If you have not already put in a line of this, try it for the Fall trade, and recommend it to your customers. You incur no risk in doing so; we fully guarantee it.

It is put up in gallon cans, you sell it at \$1.00 per gallon and make your profit.

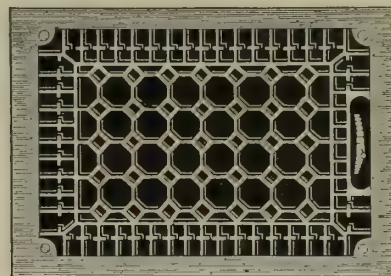
A. RAMSAY & SON COMPANY,

Established 1842.

MONTREAL.

Paint Makers.

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

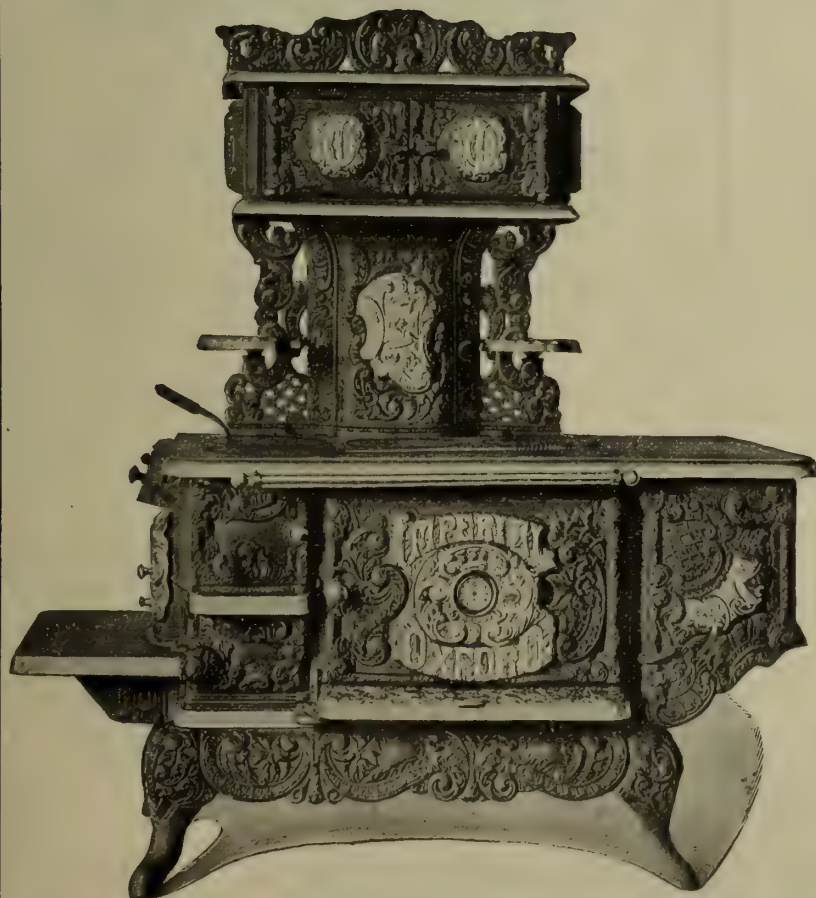
OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



THE

Imperial Oxford Range

is the first one that comes to the mind of a prospective customer. You don't have to explain it—the name tells it all.

Agents for the Imperial Oxford Range find this an advantage in selling Imperial Oxfords. Would you like to represent us for your district?

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.

Buying the Best and Paying for it.

There are two things that never go together—the best article and the lowest price.

The best article—whatever it is—must be made from the best material, by the best process, and with the aid of the best skilled workmen. The best article therefore, must cost most to produce, and necessarily command the best price.

**If you want the best article
you must pay for it.**

There are two things which always go together—the poorest article and the lowest price. You pay your money and take your choice !

The "C" Brand Horse Nails

have always stood highest in the opinion of the trade, and they have always been sold at the best price. They are made from the best material known for the purpose or used by any manufacturer, and are of a special quality of Swedish charcoal refined mild steel, which is much superior to the so-called "Norway Iron."

Our nails are forged into the desired pattern while the rods are at a white heat, which is positively the best process in use; the result being a thoroughly hammered nail, which, after passing through the several processes required of rolling, pointing and finishing, are all finally submitted to the most exacting inspection and hand sorting.

Every box of nails is therefore warranted perfect and ready for immediate use. They will be found in use by the Farrier to be the easiest to drive, and stand the hardest usage with the best results. They are the cheapest to buy, as they are the best, and the most satisfactory to the consumer in every respect.

In ordering Horse Nails, specify that our make and brand shall be supplied. Don't accept substitutes said to be "Just as Good." There is only **One Best**, and that is the old reliable "C" brand.

**Canada Horse Nail
Company** **Montreal.**

Established 1865.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

WHY DON'T YOU BUY...



**Rex
Flintkote
Roofing**

NO Roofing has ever given satisfaction or service like **REX Flintkote Roofing**. It is the result of years of labor, and is made of the best matted wool fibre treated by our own compounds. It is waterproof, fire-resisting, and is not affected by vapors of acids or alkalies. It costs less than shingles, and can be laid by anyone. Our book tells more about it, and will be sent free, with samples.

J. A. & W. BIRD & CO.,
49 India Street, Boston, Mass.

Rex Flintkote Roofing is used on thousands of buildings in the U. S. and Canada, and is fast becoming the universal roofing.

"LOOK FOR THE BOY" ON EVERY ROLL

RETURNED

OCT . 4 1904

Put Back 22
Pay 75



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Fine Silver Plated Ware and Metal Goods

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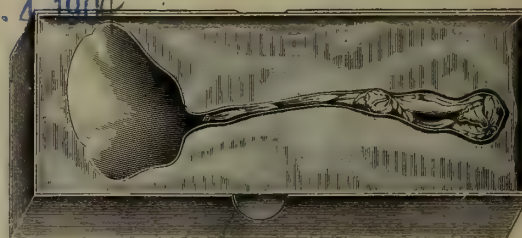
Do not place your Christmas orders until you have seen our line, as it is thoroughly up to date, and our prices are exceptionally low.

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OCT . 4 1904

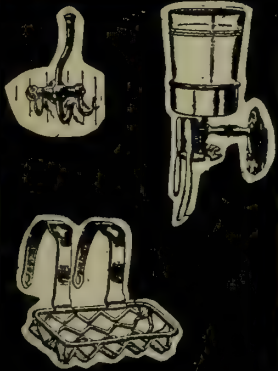
at prices that will astonish you.



Orchid Gravy Ladle, in French Gray Finish.

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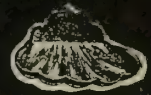
FACTORY AND SALESROOM: 117 Bay St. TORONTO



WRITE FOR OUR SPECIAL PROPOSITION

in the new Nethery Patent Flush Valve, the new valve that dispenses with the tank in closet outfits. Everybody wants it because it's the greatest device ever introduced to the plumbing trade.

Jas. Morrison Brass Mfg. Co., Limited
TORONTO, ONT.



UNSANITARY CLOSETS ON THE FARM.

THE Department of Agriculture, Ottawa, has issued a bulletin to farmers which should be read by every dealer in plumbing goods in Canada. If the trade would make full use of this bulletin in awakening the farmers of their district to the great disadvantage of unsanitary conditions of wells and closets they would be able to arouse greater interest in modern sanitary appliances.

The bulletin reads as follows: Attention was recently called to the fact that out of some 100 to 200 samples of water from farm wells analyzed annually by Prof. Shutt, chemist of the Dominion Experimental Farms, not one-fifth are found safe and wholesome. By far the greater number have to be utterly condemned, and it seems very evident that a great improvement in our water supplies is necessary. This dangerous condition of many farm wells is undoubtedly due to pollution by unsanitary closets. There is no reason why we should have our farmhouses to-day in the semi-barbaric condition in which so many of them are, with their closets and privies a menace to public health. We may talk about bacteriology, sanitation, and so on, but all that and a great deal more is included in what we understand by "cleanliness." The lack of cleanliness is primarily a matter of ignorance, and secondly a matter of laziness.

An Ontario editor, who is a member of the board of health in his town and familiar with sanitary conditions in his section, says in effect: Perhaps the farmers of this district are worse than elsewhere, but of all the farms I have visited during the past few years I have yet to learn of one closet kept with a regard to common decency, not to speak of hygienic laws. This state of affairs is utterly inexcusable. In the

towns the closets are inspected by order of the boards of health, and the people are gradually being persuaded to adopt the dry earth system. Very few pits are left and no new ones are being dug. Inspection by county and township boards of health may be impracticable, but the self-respect of farmers and their families ought to mean something in this respect, if regard for health means nothing.

Ordinary shallow wells in the vicinity of the old-fashioned privy pits are almost certain to become contaminated by seepage. The soil is an excellent filtering and cleansing agent, oxidizing organic matter rapidly, and tending to check the development of many of the common putrefactive bacteria. But the soil is only able to dispose of a certain amount of contaminating material, and such disposal takes time, so that by heavy rains the contaminating matter may be carried far into the earth below the true purifying layer, and thus soak unchanged into the wells. An old pit which has been closed and covered with earth is almost equally dangerous, as the decomposition of the large mass of excreta contained therein is a matter of years, unless hastened by the proximity of trees whose roots reach the pit. The contents should be removed and spread upon a field, and the pit left open long enough to permit the decomposition of any organic matter remaining.

If farmers once took time to think of these matters, there would undoubtedly be a great improvement. Windmills are now both cheap and common, and there is no reason why well-to-do farmers should not have a water system in their houses, with all the conveniences and advantages which residents in the cities enjoy from the waterworks systems there established.

Though not quite so convenient, the

dry earth closet is so cheap and so satisfactory from the sanitary point of view that no farmer can discover a reasonable excuse for refusing to adopt it. A well laid cement concrete floor will be found by far the easiest to keep in a clean and wholesome condition. A stout box of suitable size, mounted on runners and with a strong hook at one end to which a horse may be attached, makes a receptacle that can be conveniently drawn to the field or barnyard to be emptied. This box may be made wholly or in part of sheet iron, and if the bottom be semi-circular in form a kettle of hot water will be found sufficient to loosen the frozen contents in Winter. Galvanized iron buckets, larger at the top than at the bottom, are also easy to empty in Winter. The nature of the receptacle is largely a matter of convenience; the essential features of the system are the storing and use of a plentiful supply of dry earth and the emptying of the receptacle regularly. If the contents be spread thinly over the surface of a field, they will be decomposed in a very few days with no danger to the public health.

Ashes should not be used as a substitute for earth, and road dust is very little better. The surface soil of a field or garden that has been frequently cultivated will be found just the thing. If a little coarse or lumpy it may be run through a gravel screen. It is always advisable to keep a good supply on hand, as it becomes drier and better with age when stored in a bin.

If the man who has hitherto been careless in this particular will adopt and maintain a proper sanitary system in connection with his closet, he will find himself gaining largely, not only in self-respect, but in the respect of his family and of the strangers within his gates. Furthermore, he may thereby escape the ravages of such diseases as

typhoid fever, which are so frequently traced to the use of contaminated water.

Building Notes.

Fire did \$25,000 damage to the London Builders' Supply Co., London, Ont.

The corner-stone for a \$10,000 Anglican church was laid at Sydney Mines, N.S., last week.

A \$20,000 postoffice is to be built at Sydney Mines, N.S., by James Reid, contractor, Sydney Mines.

The Hamilton Armory is to be enlarged, a site for the addition having been bought at a cost of \$29,000.

Hyatt Bros. have begun the erection of twenty-four dwelling houses on Hyatt avenue, between Grey and Hill streets.

Thos. J. Truman, Midland, Ont., is calling for tenders for hot water heating in the West Ward school, Midland, Ont.

The C.P.R. and the Galt Railway are to build a union depot, round house, etc., at Lethbridge, B.C., to cost over \$50,000.

Tenders for the enlargement of Cottingham and Huron street schools, Toronto are called by October 6 by W. C. Wilkinson, secretary of Board of Education.

The first sod was turned on Saturday afternoon, beginning the work of erection of the new edifice for St. Paul's Presbyterian church, corner of Bathurst street and Barton avenue, Toronto.

The contract for the new hall of the German society of Winnipeg, has been let to Mr. Gauer. The building is to be erected, inclosed and roofed in by the first of December, and ready for occupation by the first of January.

Tenders are asked before October 17 for the erection and completion of a proposed Collegiate Institute building at Galt, Ont., to be erected on the site of the present Collegiate Institute building. Drawings and specifications can be seen and all other information obtained at Galt, also at Hamilton, at the Offices of Stewart & Witton.

Building Permits.

TORONTO.

East & Co., factory, rear 300 Yonge street, \$6,000.

William Mills, dwelling, 65 Langley avenue, \$4,000.

H. Hutson, four dwellings, 62 Dewson street, \$10,000.

J. A. Doidge, six dwellings, 28-38 Bishop street, \$6,600.

L. C. Sheppard, dwelling, 29 Simpson avenue, \$1,800.

Conger Coal Co., shed near Albany on Dupont street, \$7,000.

Chas. B. Harrison, residence, 172 Delaware avenue, \$3,000.

A. H. Colwell, dwelling, near Lowther on Brunswick avenue, \$3,500.

Samuel Frame, store and dwelling, College and Beatrice street, \$2,300.

Fred W. Cox, three dwellings near Howland road on Gerrard east, \$4,500.

York Co. L. and S. Co., dining and assembly hall, near Roncesvalles avenue, on Fermanagh, \$15,000.

OTTAWA.

J. H. Copping, workshop, south side of Laurier avenue, \$2,000.

S. Davies, four dwellings, south side of Pretoria avenue, \$4,800.

William Nicholson, dwelling, south side of Somerset street, \$1,000.

Miss Sophia Goodwin, dwelling, north side of Stewart street, \$5,000.

A. Tracey, alterations to dwelling, west side of Bank street, \$1,000.

Ottawa Investment Co., dwelling, north side of Albert street, \$1,500.

Ald. Grant, finishing a building, east side of Henderson avenue, \$1,800.

Mrs. S. J. Major, ironclad stable and warehouse, south side of York street, \$600.

City corporation, solid brick meat market, south side of Sparks street, \$4,000.

William Graham, addition to a brick dwelling, south side of Maclaren street, \$2,000.

Sisters of the Congregation of Grey Nuns, dining-room, south side of Rideau street, \$4,000.

The W. C. Edwards Co., Limited, addition to a factory, west side of Sussex street, \$5,500.

Ottawa Electric Railway Co., solid brick power house, north side of Middle street, \$2,000.

Separate School Board, school, north side of Murray street, \$13,700. Solid brick school, also on the north side of Murray street, \$24,000.

The Russell House Co., Limited, addition and alterations to hotel, south side of Sparks street, \$15,000.

MONTREAL.

A Dansereau, 657 Breboeuf street, one dwelling, \$1,200.

S. Bayard, St. Denis street, one dwelling, \$3,000.

R. Geothe, Esplanade avenue, one house, \$7,000.

E. Vaudelat, 219 Lasalle street, one dwelling, \$1,300.

Montreal General Hospital, alterations on hospital, \$1,500.

Joseph Ferland, Mentama street, two houses, each \$1,600.

Joseph Lanouette, 409 Aylwin street, two houses, each \$1,500.

J. & E. Latreille, Esplanade avenue, two houses, each \$10,000.

W. Ladouceur, St. Hubert street, three dwellings, each \$3,666.

Geo. Fogg, 298 Notre Dame street, alterations on dwelling, \$1,500.

Robert Neville, Jr., Bishop street, one house containing 18 dwellings, \$50,000.

TRADE BETWEEN CANADA AND MEXICO.

SIR WILLIAM MULOOCK in a recent interview said: "When in Mexico

I arranged with President Diaz to receive Canadian delegations in regard to Canadian interests, and planned that they were to be organized as a body to make known Canadian views to the Mexican authorities from time to time. The Canadian clubs of Mexico shortly intend to avail themselves of the opportunity afforded by my visit, to wait upon the president and make suggestions for the promotion of trade. Mr. James H. McLeod, a former resident of Woodstock, who is president of the new club, and at the same time the leading wholesale grocer of Mexico, is coming to this country to further advance the scheme. In his own business alone he imports enormous quantities of bacon, fish, cheese and other food products. At present all his purchases are made in the United States, but Mr. McLeod intends when the proposed direct lines of steamships with Canada are established to purchase exclusively from Canada. There are many other Canadian business men in the southern republic who are prepared to do the same.

"The Canadian clubs in Mexico represent a growing desire throughout that country to develop mutual trade with us, and Mexico will doubtless in the near future be one of Canada's most profitable markets. We can buy from them such things as hides, sisal, coffee, tropical fruits and spices, rubber, mahogany and other hard woods. On the other hand there is a market in the republic for Canadian lumber of all kinds, railway ties in unlimited quantities, coal, furniture, and nearly all classes of manufactured goods, bacon, hams, butter, cheese, fish, etc."

Sir William was advised last week that he had been elected an honorary member of the Canadian Club in Mexico.

Have you
tried it?

Tried what?

SELLING
MANTELS.

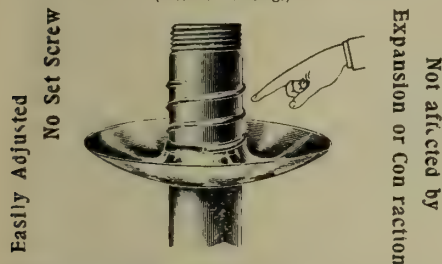


This is in your line of business, and it will
pay you.

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CEILING and FLOOR PLATE

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A PERMANENT
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Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to
lay, all ready covered with gravel. Requires no experience to lay, and lasts
for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write to-day.

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Hayfork Pulleys,
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Jack Screws,

Mrs. Potts Irons,
Diamond Dampers,
Etc.

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New Process Oil Heaters.



Are absolutely safe.
Produce intense
heat without smoke.
Simple as a lamp in
construction.

Light
and
Durable

Founts are remov-
able for Cleaning
and Filling.
Provided with Bail
Handle with which
they can be easily
carried to any part
of the house.

The Thos. Davidson Mfg. Co., Limited

MONTREAL.

No. 10 - "New Process." Design attrac-
tive. Construction first-class.
No. 17 - "Standard." Cheaper in quality,
but well proportioned and handsome in
appearance, and strictly up-to-date heater.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

AT the annual meeting of the Maple Leaf Harvest Tool Co., Limited, held in Tilsonburg, Ont., the board of last year was re-elected, and Carl Jansen, who was secretary of the company, was appointed manager as well.

* * *

The Laurie Engine Co., of Montreal, are meeting with marked success in placing their feed-water heaters on the market. At present they are placing two 1,000 h. p. heaters in the Winnipeg Street Railway plant; two 1,000 h. p. in the Riordan paper mills, Hawkesbury, Ont., and two 2,000 h. p. with the Toronto Street Railway, besides many others of smaller capacity throughout the country. They are commencing the manufacture of a new line of triplex power pumps, patterns for which are now under way. They will be pleased to answer any inquiries regarding these pumps.

• • •

The Nanaimo Electric Light Co., Nanaimo, B. C., have given the Canada Pipe Co., Vancouver, an order for 2,500 feet of 30 in. pipe, to supply water for its new power house. The source of water supply is good for eight months of the year, so will need fuel for the other four months. A boiler room will therefore be erected outside the power house, and the engine, which at present keeps the lights burning in Nanaimo, will be removed to the new works. When this power plant is in operation it will be ample for many industries in addition to those now in Nanaimo.

NOTES.

East & Co., Toronto, are enlarging their factory.

The Ottawa Electric Railway is to build and equip a new power house.

The W. C. Edwards Co., Ottawa, are making a \$5,500 addition to their factory.

The Backus Syndicate, Minneapolis, has completed arrangements for erecting a 3,000 barrel flour mill at Fort Frances, Ont.

E. M. Bostwick, St. John, N. B., has sold a tract of thickly wooded land, about 1,000 acres in extent, to the Prejopsot Paper Co., Brunswick,

Me. The price is placed at about \$250,000.

The Mexican Light & Power Co., controlled by Toronto and Montreal capitalists, have secured the contract for lighting the City of Mexico and suburbs up to 1917. The lighting of public buildings is included.

John D. Macdonald, general superintendent of the West Kootenay Power & Light Co., is at Banff to superintend the installation of the Bankside collieries electrical plant for the Canada General Electric Co.—Winnipeg Free Press, Sept. 22.

Licenses have been issued to the following companies, permitting them to do business in Ontario: New River Consolidated Coal and Coke Co., Rossindale Belting Co., the B. Houde Co., Eye-Fix Remedy Co., Minnehaha Mining and Smelting Co., Montreal Star Publishing Co.

COMPANIES INCORPORATED.

The Ontario Independent Telephone Co., Windsor, Ont.; capital, \$100,000; provisional directors, C. W. Taylor, J. R. Brooks, J. A. McRae, P. T. Chesley, A. D. Prosser.

The Crown Oil Co., London, Ont.; capital, \$300,000; provisional directors, D. S. Robb, B. G. Baker, Clara McDowell, Josephine W. Brake; purpose, to develop oil wells.

The Ham & Nott Co., Limited, Brantford; capital, \$100,000; directors, J. T. Ham, J. H. Ham and T. L. Lyle, of Brantford; purpose, to make refrigerators, washing machines, etc.

The Simplex Coal Saver, Limited, Toronto; capital, \$40,000; directors, P. H. Patriarche, F. B. Allan and Wm. Eacrett, of Toronto; purpose, to make and sell smoke consumers, fuel savers, etc.

The Erie Realty Co., Limited; capital, \$40,000; head office, Toronto; directors, F. McMahon, C. W. Winyard, G. H. Sedgwick, Alex. Fasken and Wm. Henry Syms, of Toronto; to do a real estate business.

The Berlin Rink & Auditorium Co., Limited; capital, \$25,000; directors, D. Hibner, C. H. Doerr, John Cochrane, C. Brame and W. Roos, all of Berlin; purpose, to erect and conduct skating rink, auditorium, etc.

The Standard Art Mfg. Co., Toronto; capital, \$100,000; provisional directors,

J. B. Alderson, A. A. Dickson, C. W. Younge, F. J. Purser, W. S. Jackson; purpose, to manufacture brushes and other art goods.

To Raise the Wind.

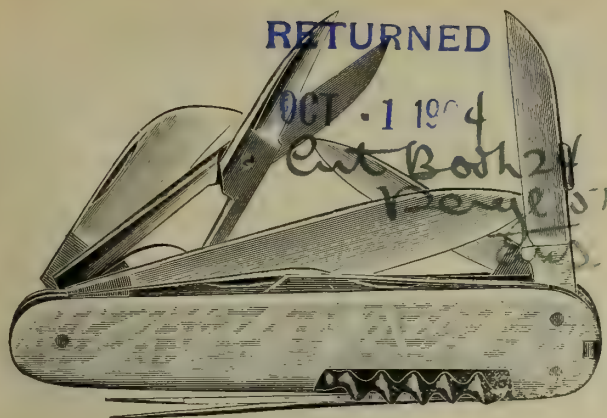
As is generally known, it is not permissible to employ an American tug in Canadian waters to tow a Canadian vessel, except in cases of dire distress. It is said that the schooner "Mary Ann," of Wallaceburg, was becalmed in Lake St. Clair at the mouth of the River Thames. She was bound for Chatham loaded with coal for a factory there. The skipper in despair telegraphed the authorities at Ottawa as follows: "Becalmed! No wind! May I use a Yankee tug?" The reply came back quickly: "No! Use one of Mans-ton Campbell's fanning mills."

STOCK FOODS IN HARDWARE STORE.

DURING the Fall months the retail hardware dealer completes his campaign for Winter business. At this season the farmer in the spare time during the threshing work makes preparation for the care of his cattle during the long months of Winter. Stock raising has become an important element of the farmer's life in nearly all parts of Canada, and so everything is done to bring this branch of his business to the most profitable level possible. Fodder corn has been found much superior to hay in many parts of the country, and silos have been or are being put up in all parts of the country. During recent years another development has made possible increased returns to the farmer in stock raising—the use of stock foods.

Last Winter Hardware and Metal strongly advised hardware retailers to add this line to their stock-in-trade. From information to hand it is evident that many of them did so and, almost without exception, the results of the experiment have been satisfactory. The merchants have found the line a popular one, and the demand has steadily increased. It has, too, been a profitable line, as the margin allowed by the manufacturers is large and the waste practically nothing.

There is no reason why those of the hardware trade who have not yet stocked the line should not give it a trial. The International Stock Food Co., whose advertisement appears elsewhere in this issue, have done everything possible to make their stock food popular with the farmer. They advertise freely to farmers, put their goods up in attractive packages, and then back up the retail dealer with a system of advertising which cannot help attracting business.



KNIVES, SCISSORS and RAZORS.

F.W.LAMPLOUGH & CO.
MONTREAL.

PIPE THAT IS PIPE.

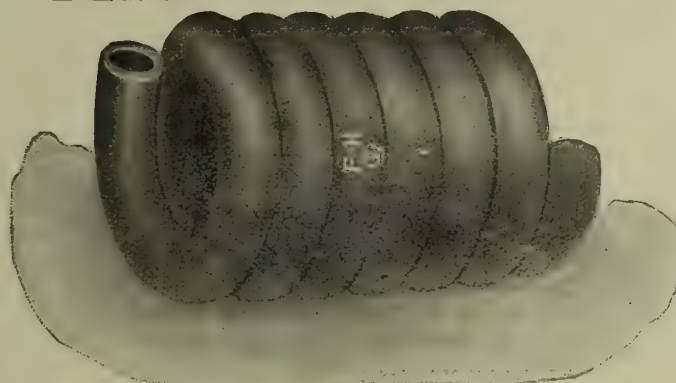
THIS IS OUR BRAND

P-H



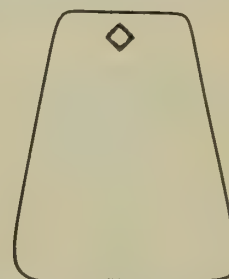
You Want It.

See that You Get It.



BLACK, AND GALVANIZED.

THIS IS OUR TAG.

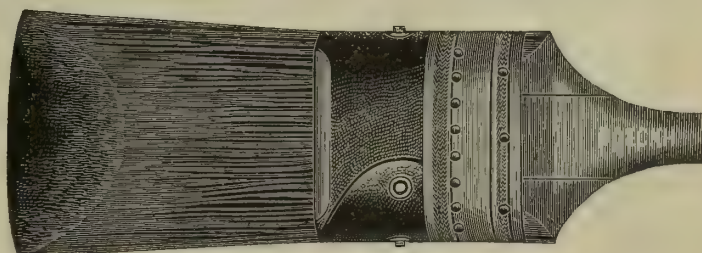


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PAGE-HERSEY IRON AND TUBE CO., LIMITED, GUELPH, CANADA

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is as important as price when buying brushes. They must both receive careful consideration to ensure your customer full value for his money, and still leave the dealer a fair margin.



BOECKH'S PAINTERS' BRUSHES

are the best value on the market, and possess special features not found in other makes, which places them in the lead as **"READY SELLERS."**

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**Metal Fireproof Windows
and Skylights Glazed
with Wired Glass.**

A. B. ORMSBY LIMITED,
MANUFACTURERS AND CONTRACTORS,
Cor. Queen and George Streets,
TORONTO, ONT.

Have Added Another Storey.

The Sanderson-Harold Co., Limited, of Paris, Ont., manufacturers of refrigerators, screen doors and screen windows, have met with such a favorable reception from the trade that they found it necessary before commencing operations for another season to add another storey to part of the construction department, 40x120 feet in size, and have also increased the capacity of the dry kiln and the machine shop by enlarging. With these improvements and new machinery they will be able to supply the trade with double the quantity of goods sold during the past season.

TWO VIEWS OF THE STEEL RAIL DUTY.

New hopes had been kindled in the breasts of our manufacturers by the latest fiscal changes in Canada, and some of our most enterprising manufacturers were preparing to take advantage of it. Unfortunately an enormous wall of protection has now been erected around the Canadian iron and steel industry, which renders it almost futile for any other country to attempt to compete with the Dominion except in certain specialties.—Birmingham Post.

* * *

Representatives of leading rail interests in this country reluctantly admit that the new Canadian tariff on steel rails will lose to this country one of its best customers at a time when the outlook for increasing the present business with Dominion roads was never better.

All the principal roads in Canada have extensive development plans now under way or soon to be, and these call for large amounts of rails and track equipment, which the steel mills of this country had reason to expect would come to them.

Last year United States steel concerns sold to Canada a total of light and heavy rails of \$1,397,858 as compared with \$1,896,822 sold to the Canadians by Great Britain. This year until the new tariff became operative the rail business with Canada was not only good, but constantly improving.

When the last rails in orders now on the books of the American steel companies are sent across the line before November 30, however, it will practically mark the loss of one of our best rail customers, unless the Canadian steel companies fail to carry out their agreement with the Dominion Government.—Wall Street Journal.

The Cannington Carriage Works are thinking of moving to another centre, and a proposal has been made that they remove to Welland, Ont.

Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Philip D. Johnston; 65 full-page plates and 2 folding plates, with full text and 184 illustrations; cloth.....\$2.00

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By W. A. Wittbecker. How to wire buildings for bells, alarms, annunciators, and gas lighting from batteries. 55 pages, illustrated; paper, 25c.; cloth.....50c.

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By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed.....\$4.00

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A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages.....25c.

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Practical Plating and Polishing.

Best and Most Approved Methods of Preparing and Cleaning all Metals for Electro-Plating and Polishing. 114 pages, illustrated.....80c.

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By Geo. W. Kittredge. Pattern cutting as applied to all branches of sheet metal work, 430 pages, 744 illustrations.....\$5.00

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Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates.....\$1.50

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By Wm. G. Snow. Comprehensive treatise on warming buildings with hot air, with appendix on furnace fittings, 170 pages, 90 illustrations, cloth.....\$1.50

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House drainage and plumbing, 309 pages, 146 illustrations.....\$2.00

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For beginners in plumbing, 66 pages.....25c.

Kitchen Boiler Connections.

A selection of practical letters and articles relating to water backs and range boilers. Fifth edition, enlarged.....\$1.00

Steam and Hot Water Fitters' Text Book.

A book prepared for the Steam and Hot Water Heating Course at the New York Trade School, with supplementary chapters on house heating, specifications and surface estimating, by Thos. E. McNeill. 140 pages; 5 x 7 in.: numerous illustrations; cloth binding.....\$1.00

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Twelve short lessons on figuring from architects' or scale drawings the amount of material required to cover a given surface in flat, hipped or irregular shaped roofs, by W. Neubecker. 31 pages; 5 1/2 x 8 in.; 12 illustrations; paper cover.....25c.

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HACK SAW BLADES.
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Manufacturers of the Celebrated **"Saugeen Brand"**
OF PORTLAND CEMENT.

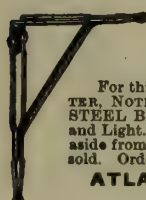
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 "Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the **BRADLEY STEEL BRACKET.** It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,

New Haven, Conn., U.S.A.

Books for Hardware Men

The American Hardware Store.

By R. R. Williams; 576 pages; 6 $\frac{3}{4}$ x 10 inches; 660 illustrations; bound in cloth\$3.00

Hardware Store Business Methods.

A series of articles dealing with business methods in the hardware store, by different authors; 227 pages; 5 $\frac{1}{2}$ x 8 inches; illustrated; cloth binding.....\$1.00

Enquiries for above books should be sent to

Book Department, HARDWARE AND METAL TORONTO.



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain **HOW** and **WHY.**

A. B. JARDINE & CO.

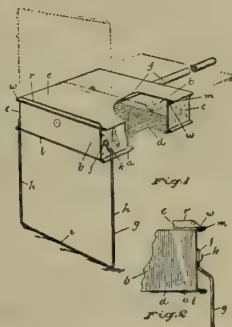
Mfrs. TAPS and DIES.

HESPELER, ONT.

PIG IRON FOR IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



IT MAY BE GENIUS

but whatever it is, the All Metal Ash Sifter we are making is distinctly ahead of any ash sifter you ever saw at the price.

SELLS FOR 25c.

A marvel of cheapness when the excellence of the article is taken into account. Send for circular.

C. M. CUTTS & CO, Toronto Junction, Ont.

Pat. in Canada, May 17, '04. U.S. Pat. allowed.



Pedlar's "Perfect" Metal Lath

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.

24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,
 or 767 Craig St., Montreal,
 Que.**

Ready Roofing, Sheathing and Black Diamond Tarred Felts, Building Papers, Fibre and Manilla Wrappings, etc., are unexcelled.

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLIETTE, QUE.

ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET, MONTREAL

CURRENT MARKET QUOTATIONS.

Sept. 30, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TINPLATES.

Charcoal Plates—Bright.
M.L.S., equal to Bradley— Per box.
I.O. usual sizes. \$6 50
I.X. " 8 00
I.X.X. " 9 50

Famous, equal to Bradley—
I.O. 6 75
I.X. 8 25
I.X.X. 9 75

Raven and Vulture Grades—
I.O. usual sizes. 4 25
I.X. 5 00
I.X.X. 5 75
I.X.X.X. 6 50

"Dominion Crown Best"—Double
Coated, Tissue. Per box.
I.O. 5 50
I.X. 6 50
I.X.X. 7 50

Allaway's Best—Standard Quality.
I.O. 4 50
I.X. 5 50
I.X.X. 6 50

Coke Plates—Bright.
Bessemer Steel—
I.C., usual size, 14x20 3 35
I.C., special sizes, base 3 60
20x28 7 10

Charcoal Plates—Terne
Dean or J. G. Grade—
I.C., 20x28, 112 sheets 7 50
IX., Terne Tin 10 50

Charcoal Tin Roller Plates.
Cookley Grade—
X.X., 14x56, 50 sheet bxs. } 7 00
" 14x60, " }
" 14x65, " }

Tinned Sheets.
72x30 up to 24 gauge 7 25
" 26 7 75

IRON AND STEEL.
Common bar, per 100 lb. 1 80
Refined " 2 20
Horseshoe Iron " 2 25
Hoop steel, 1 1/2 to 3-in. base 2 75
Sleigh shoe steel, " 2 10
Tire steel, " 2 30
T. Firth & Co.'s tool steel, per lb 0 12 1/2

B. K. Morton & Co.—
" Alpha " tool steel. 0 70
" M. " Self-Hardening. 0 60
" T. " Standard. 0 14
Cases high speed steel. 0 60
" standard tool steel. 0 14
" crucible sheet steel. 0 14
" Chas. Leonard's tool. 0 08

Crucible Steel Co.
" Black Diamond. 0 10
" Silver steel. 0 13
" Special. 0 17
" Rex high speed steel. 0 65
" Self-Hardening. 0 45
" Sanderson's Crucible Tool. 0 09
" Superior. 0 12
" Extra Anil. 0 15
" Self-Hardening. 0 45
" Rex high speed. 0 60
Jonas & Colver's tool steel. 0 10
" " Air-Hardening. 0 70
Drill steel, per lb. 0 08

BABBIT METAL.

"Tandem," A. per lb. 0 27
" B. " 0 21
" C. " 0 11 1/2
Frictionless Metal. " 0 23

Syracuse Smelting Works:
Aluminum, genuine. 0 45
Government, " 0 44
Tough, " 0 40
Hard, " 0 40
Dynamo. 0 30
Special. 0 25
Harmony. 0 22
Car Box. 0 20
Extra. 0 15

The Canada Metal Co.:
Imperial, genuine. 0 40
Metallic. 0 30
Hercules. 0 20
Star. 0 15
No. 1. 0 12
No. 2. 0 10
No. 3. 0 06
No. 4. 0 05

Geo. Langwell & Son.
No. 1. 0 08
No. 2. 0 07
No. 3. 0 05 1/2
Extra. 0 09 1/2

BLACK SHEETS.

Montreal. Toronto
10 and 16 gauge. 2 25 2 50
18 gauge. 2 30 2 50
20 " 2 30 2 50
22 to 24 gauge. 2 35 2 70
26 " 2 40 2 80
28 " 2 40 2 90

COPPER WIRE.

Discount, 50 per cent.
CANADA PLATES.
Ordinary. 2 50
All bright. 3 50
Galvanized Canada Plates—
Ordinary. Dom. Crown.
18x24x52. 4 25 4 35
" 60. 4 50 4 60
20x28x80. 8 50 8 70
" 94. 9 00 9 20

GALVANIZED SHEETS.

Queen's
Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge. 3 65
18 to 24 gauge. 3 75 3 50 3 75 3 75
26 " 4 00 3 75 3 90 4 00
28 " 4 25 4 00 4 05 4 25

American brands, \$4.00 for 10 1/2 oz.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 5-16 " 4 45 5 60
" 7-16 " 3 45 4 45
" 9-16 " 3 35 4 45
" 1 1/4 " 3 35 4 45
Halter, kennel and post chains, 40 to 40 and
5 per cent.

Cow ties. 40 p.c.
Tie out chains. 65 p.c.
Stall fixtures. 35 p.c.
Trace chain. 45 p.c.

Jack chain, iron, single and double, discount
35 p.c.

Jack chain, brass, single and double, dis-
count 40 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots. 13 75
Bars.
Cut lengths, round, 1/2 to 1 in. 21 00 23 00
" round and square,
1 to 2 inches. 21 00 23 00

Sheet.

Plain, 16 oz., 14x48 and 14x60 20 00
Plain, 14 oz. 21 00
Tinned copper sheet. 24 00
Planished. 32 00

Braziers (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 " 0 21
" 50-lb. and above " 0 20

BOILER AND T.K. FITTINGS.

Plain tinned, per lb. 0 28
Spun, per lb. 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4 0 23
Tubing, base, per lb. 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb. 6 00 6 25
Domestic. " 0 06

ZINC SHEET.

5-cwt. casks. 6 15 6 50
Part casks. 6 50 7 00

LEAD.

Imported Pig, per 100 lb. 3 20 3 30
Bar, per lb. 0 05
Sheets, 24 lb. sq. ft., by roll. 0 06 1/2
Sheets, 3 to 8 lb. 0 06

NOTE.—Cut sheets 1/2c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's. per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count, 17 1/2 p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 3 p.c. cash, freights included.

PLUMBING GOODS.

BATH TUBS.
Zinc. Standard Enameled. 6 00
Copper, discount 20 per cent. off revised list.

BATHS.
5 1/2-ft. 2 1/2 in. rolled rim, 1st quality. 21 60
5 1/2 " " 2nd " 16 35

CLOSETS. Net.
Fittings. 1 00
Plain Simplex Syphon Jet. 9 00
Emb. " 9 50

Fittings. 1 25
Low Down Elgin or Teanonic, plain. 6 00
Low " emb. 6 50
Connection. 1 25
Plain Richelieu. 4 25
Emb. 4 50

Connections. 1 25
Basins, P.O., 14-in. 0 63
Basins, oval, 17 x 14-in. 1 50
Basins, " 19 x 15-in. 2 00

IRON PIPE.

Black pipe— Per 100 feet.
1/2 inch. 1 97
" 3/4 " 2 15
" 1 " 2 28
" 1 1/4 " 2 86
" 1 1/2 " 4 10
" 2 " 5 62
" 2 1/2 " 6 72
" 3 " 6 98
" 3 1/2 " 7 28
" 4 " 7 58
" 4 1/2 " 8 12
" 5 " 8 72

Galvanized pipe—
1/2 inch. 2 80
" 3/4 " 2 86
" 1 " 3 14
" 1 1/4 " 4 01
" 1 1/2 " 5 75
" 2 " 7 85
" 2 1/2 " 9 43
" 3 " 12 57

Malleable Fittings—Discount 20 p.c.
Cast Iron Fittings—
Standard, 57 1/2 per cent.; unions, 55 per cent.;
on nipples, headers and flanged unions, 60
per cent.

PLUMBERS' BRASS GOODS.
Standard Compression work, dis. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra dis-
count 10 per cent.

Lever handle Stops and Waste, discount 60
per cent. With in lots of 2 dozen and over,
an extra discount of 10 per cent.

J.M.T. Globe, Angle and Check Valves, dis-
count 55 per cent.

Standard Globe, Angle and Check Valves,
discount 65 per cent.

Kerr's special standard globes and angles,
discount 60 per cent.

Kerr's Jenkin disc, copper-alloy disc and
heavy standard valves, discount 60 per cent.

Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator
valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radia-
tor valves, discount 70 per cent.

Kerr's quick-opening hot-water radiator
valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate
valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate
valves, I.B.B.M., discount 70 per cent.

J.M.T. Radiator Valves discount 55 per cent.

Standard Radiator Valves, discount 65 per
cent.

Patent Quick-Opening Valves, discount 65
per cent.

No. 1 compression bath cock. net 1 75
No. 4 " " 1 90
No. 7 Fuller's " " 2 25
No. 4 1/2 " " 2 25
Patent Compression Cushion, basin
cock, hot and cold. per doz. 15 00
Patent Compression Cushion, bath
cock, No. 2208. " 2 25
Square head brass cocks, discount 55 per cent.
" iron " 50 to 60 " 2 00
Thompson Smoke-test Machine \$25.00

RANGE BOILERS.
Copper, 30 gallon. " 22 00
" 35 " " 24 00
" 40 " " 28 00
Discount off copper boilers 15 per cent.

SOID PIPE AND FITTINGS.
Light soil pipe, discount, 50 per cent.
" fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60
per cent.
and 8-in. pipe, discount 40 and 5 per cent.

SOLDER. Per lb.
Bar, half-and-half, guaranteed 0 18
Bar, half-and-half, commercial 0 17

WRENCHES.
Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 20 to 25 per cent.
Towers' Engineer. each 2 00 7 00
" S. " per doz. 5 80 3 48
G. & K.'s Pipe. " 3 00
Burrell's Pipe. " 3 48
Pocket. " per doz. 0 25 2 90

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.	
Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity ½ extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian reds	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
" umber	7 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 06
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD. Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25
Genuine, 100 lb. kegs	4 75
No. 1, 560 lb. casks, per cwt	4 00
No. 1, 100 lb. kegs, per cwt	4 25

WHITE ZINC.

Extra Red Seal	0 06
French V. M.	0 06
Lehigh	0 06

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.	
Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams' paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy black	1 50
Henderson & Potts' "Anchor"	1 35
Ramsay's paints, pure, per gal.	1 20
" Thistle,	1 00
" Outside, bbls	0 55
Island City House Paint	1 25
" Floor	1 25
Sterling House Paint	1 20
" Floor	1 10
National	1 05

PATTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 10
Bladders in kegs, boxes or loose	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
" rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
" No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
" orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
" black japan	1 10	1 20
" No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granitine floor finish, per gal	2 75	
Maple Leaf coach enamels; size 1,	\$1.20	
size 2, 70c.; size 3, 40c. each		
Sherwin-Williams' kopal varnish, assorted case, from	to 1 gal., \$2.50.	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner		
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
American \$2.00 per 1000.	
C. B. Caps American, \$2.60 per 1000.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, old 20 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, list net Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American 10 per cent. advance on list.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount. American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

per lb.	
Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8	0 90
5 and 6	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8	1 65
5 and 6	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Double bit	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.

Woodyatt Hudson, per doz., net	4 50
AUGERS.	
Gilmour's, discount 65 and 5 per cent. off list.	

AXES.

Chopping Axes	
Single bit, per doz.	7 00 10 00
Bench Axes, 40 per cent.	10 00 18 00
Broad Axes, 25 per cent.	
Hunters' Axes	5 50 6 00
Boys' Axes	6 25 7 00
Splitting Axes	7 00 12 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.	
Red Ridge, boys', handled	5 75
hunters	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE	
Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	

American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

DOOR.

Gongs, Sargent's	5 50 8 00
" Peterboro', discount 50 and 10 per cent. off new list.	

FARM.

American, each	1 25 3 00
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HOUSE.

American, per lb.	0 35 0 40
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BELLOWS.

Hand, per doz.	3 35 4 75
Moulders, per doz.	7 50 10 00
Blacksmiths', discount 40 per cent.	

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	

Agricultural, not wider than 4 in., 75 per cent.	
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BITS.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

CAR.

Gilmour's, 47½ per cent.	
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EXPANSIVE.

Clark's, 40 per cent.	
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Clark's, per doz	0 65 0 90
Diamond, Shell, per doz.	1 00 1 50
Nail and Spike, per gross	2 25 5 20

BLIND AND RED STAPLES.	
All sizes, per lb.	0 07½ 0 12

BOLTS AND NUTS	
Carriage Bolts, common (\$1 list)	
" 3-16 and ½	60 and 10
" 5-16 and ½	55 and 5
" 7-16 and up	55 and 5
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60

Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5

Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4½c. per lb. off.	
Stove Rods per lb.	5½ to 6c.

BOOT CALKS.	
Small and medium, ball	per M. 4 25
Small heel	4 50

BRIGHT WIRE GOODS.	
Discount 62½ per cent.	

BUTCHERS' CLEAVERS.

German	per doz.	6 00	9 00
American	"	12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	400 " 0 50
Dry Fibre	400 " 0 55
Tarred Fibre	400 " 0 65
O. K. & I. X. L.	400 " 0 70
Resin-sized	400 " 0 45
Oiled Sheathing	600 " 1 00
Oiled	400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof " small packages	0 25
Refined Tar	per barrel 5 00
Coal Tar, less than barrels	4 00
Roofing Pitch	per 100 lb. 0 15

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.9	or 2-inch
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BUTTS.

Wrought Brass, net revised list.	
Cast Iron.	

Loose Pin, discount 50 per cent.	
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WROUGHT STEEL.

Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. B. ronzed	per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz.	1 00	1 50
Bullard's	"		6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50	8 50
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CHALK.

Carpenters' Colored, per gross	0 45	0 75
White lump	per cwt.	0 60 0 65
Red	"	0 05 0 06
Crayon	per gross	0 14 0 18

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,	per doz	\$4 00
" " " 25c. pkgs.,	"	2 00
" " " 10c.	"	75
" " " 25-lb. pall, each	"	1 20
Poultry Foods, 25c. packages	"	1 25
Cough Powders, per doz.	"	1 25
Worm	"	1 25

International Stock Foods, \$1 packages,	per doz.	8 00
International Stock Foods, per pall	"	2 75
" " " per bbl.	"	10 50
" Poultry \$1 pkgs. per doz.	"	8 00
" Worm Powders, 50c. pkgs.	"	4 00
" Pine Healing Oil, per doz	"	8 00
" Pheno-Chloro, \$1 pkgs. per doz	"	8 00
" Hoof Ointment	"	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.		

CLIPS.

Ark, discount 65 per cent.	
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An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

8-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.

Ferrey's Rod	per doz.	1 75
Coil, 9 to 11 in.	"	0 95 1 65
English	"	2 00 4 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.
Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHS.

10-inch per 100 ft. 10 00

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35
Polished, 15c. per dozen extra.	"	

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	70 and 10 per cent.
Arcade	70 " 10 "
Kearney & Foot	70 " 10 "
Diston	70 " 10 "
American	70 " 10 "
J. Barton Smith	70 " 10 "
McClellan	70 " 10 "
Eagle	70 " 10 "
Nicholson, 60 and 10 to 60, 10 and 5	"
Royal	80 "
Globe	70 to 75 "
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.	"
Jowitt's, English list, 25 to 27½ per cent.	"
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50	"

GLASS.

Window. Box Price.

Size United Inches.	Per 50 ft.	Per 100 ft.	Star	Per 50 ft.	D. Diamond	Per 100 ft.
Under 26	3 80	5 06				
26 to 40	4 00	5 44				
41 to 50	4 50	6 56				
51 to 60	4 75	7 50				
61 to 70	5 00	8 62				
71 to 80	5 30	9 38				
81 to 85		10 75				
86 to 90		12 30				
91 to 95		15 00				
96 to 100		18 00				
Discount 15 per cent						

GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each 1 65 2 40

GILLET'S POWDERED LYE.
1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.

HALTERS.

Rope, 1-inch	per gross	12 00
Rope, " "	"	9 00
Rope, 1 to 1-inch	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1½ "	"	5 20
Web	"	2 45

HAMMERS.

Nail

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

Tack.

Magnetic per doz. 1 10 1 20

Sledge.

Canadian per lb. 0 07½ 0 08½

Ball Peen.

English and Canadian, per lb. 0 22 0 25

HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

Store door per doz. 1 00 1 50

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. 1 00 1 25

Plane.

American per gross 3 15 3 75

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

Steel barn door per doz. pairs. 8 00 10 00

Stearns, 4-inch per doz. 4 50

" 5-inch per doz. 6 00

Zenith per doz. 9 00

Lane's covered—

No. 11, 5-foot run per doz. 8 40

No. 11½, 10-foot run per doz. 10 30

No. 12, 10-foot run per doz. 12 60

No. 14, 15-foot run per doz. 21 00

Steel, covered, 4 00 11 00

" track, 1 x 3-16 in(100 ft) 3 75

" 1½ x 3-16 in(100 ft) 4 75

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

Shingle, Red Ridge 1, per doz. 4 40

" 2, per doz. 4 85

Barrel, Underhill per doz. 5 00

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½

" 5-in. " 0 06½

" 6-in. " 0 06

" 8-in. " 0 05½

" 10-in. " 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. 4 50

12 in. up. 3 25

Spring, No. 20, per gro. pairs 10 50

Spring, Woodyatt pattern, per gro., No. 5, \$17.50; No. 10, \$18; No. 20, \$10.80; No. 120, \$20; No. 51, \$10; No. 50, \$27.50.

HOSES.

Garden, Mortar, etc., discount 60 per cent.

Planter, per doz. 4 00 4 50

HOLLOW WARE.

Tinned cast, 35 per cent.

HOSES.

Cast Iron.

Bird cage per doz. 0 80 1 10

Clothes line, No. 61.. " 0 00 0 70

Harness..... " 0 60 12 00

Hat and coat..... per gro. 1 10 10 00

Chandelier..... per doz. 0 50 1 00

Wrought Iron.

Wrought hooks and staples Canadian discount 60 per cent.

Wire.

Hat and coat, discount 60 per cent.

Belt..... per 1,000 0 60

Screw, bright, discount 60 per cent.

"C" brand, 40, 10 and 7½ per cent. off list { Oval

"M" brand, 55, per cent. { head

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless" 50 per cent. dia.

HORSESHOES.

F.O.B. Montreal No. 2 No. 1

Iron Shoes. and larger smaller.

Light, medium and heavy..... 3 35 3 90

Snow shoes..... 3 90 4 15

Steel Shoes.

XL, sizes 1 to 5..... 5 35

Light, No. 2 and larger..... 3 80

No. 1 and smaller..... 4 05

Featherweight, all sizes 0 to 4..... 5 35

Toeweight, all sizes 1 to 4..... 6 60

JAPANNED WARE.

50 per cent.

ICE PICKS.

Star..... per doz. 3 00 3 25

KETTLES.

Brass spun 7½ per cent. discount off new list.

Copper..... per lb. 0 30 0 50

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American..... per gross 0 60

KNOB.

Door, japanned and N.P., per

doz. 1 50 2 50

Galvanized..... per doz. 2 75 3 25

Bronze, Genuine..... 6 00 9 00

Shutter, porcelain, F. & L.

screw..... per gross 1 30 2 00

White door knobs..... per doz. 2 00

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANTERNS.

Cold Blast..... per doz. 7 00

No. 3, "Wright's"..... 8 50

Ordinary, with O burner..... 9 00

Dashboard, cold blast..... 5 75

No. 0..... 5 75

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain lined..... per doz. 2 20 5 60

Galvanized..... 1 87 3 85

King wood..... 2 75 2 90

King glass..... 4 00 4 50

All glass..... 0 50 0 90

LINE.

Fish..... per gross 1 05 2 50

Chalk..... 1 90 7 40

LAWN MOWERS FOR 1905.

Woodyatt, 10½-in., 14-in. cut \$ 8 50 to \$11 00

Star, 9-in. 6 00 to 6 50

Daisy, 8-in. 5 25 to 5 75

Philadelphia, 7½-in. 6 00 to 7 50

Woodyatt, 10½-in., ball bearing 13 25 to 18 00

Grass Boxes..... 1 75 to 2 00

King Edw'd, 12-in., 14-in. cut 9 00 to 10 00

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel..... 7 50 10 00

9-in. 5 50 6 25

8-in. 4 90 5 50

Discount 50 per cent.

LOOKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin per doz.

Cabinet.

Eagle, discount 30 per cent.

Padlocks.

English and Am. per doz. 0 50 6 00

Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

MALLETS.

Tinsmiths'..... per doz. 1 25 1 50

Carpenters', hickory, 1 25 3 75

Lignum Vitae..... 3 85 5 00

Caulking, each..... 0 40 2 00

MATTOCKS.

Canadian..... per doz. 5 50 6 00

MEAT CUTTERS.

American, discount 3½ per cent.

German, 15 per cen

Gem..... each 1 15

MILK CAN TRIMMINGS.

Discount 25 per cent.

NAILS. Out. Wire.

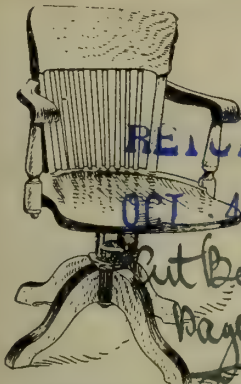
2d and 3d..... 3 30 3 45

3d..... 2 95 3 12

4 and 5d..... 2 70 2 85

6 and 7d..... 2 60 2 80

Solid Comfort.



OUR SPECIAL

Office Chairs and Stools.

A few years ago business men would have nothing in the office pertaining to comfort. Why? Because they thought it was detrimental to work. Up-to-the-minute business men are getting the easiest and most comfortable line of chairs and stools, viz., OURS, realizing that the body must be comfortable to enable the brain to do its best work without being molested looking after the ills of the body. Our Chairs and Stools are easy to the body, easy to the pocket and easy to the brain. Send for Catalog. A full line of Office Labor Systems in stock.

THE OFFICE SPECIALTY MFG. CO., LIMITED.

Factories:
NEWMARKET.55 YONGE STREET,
97-103 Wellington St., W., Toronto.

PLANE IRONS.
English per doz. 2 00 5 00
PLIERS AND NIPPERS.

Button's genuine, per doz. pairs, discount 37 1/2 to 40 per cent.
Button's imitation, per doz. 5 00 9 00
German 0 50 0 50

PRESSED SPIKES.
Discount 20 per cent.

PULLEYS.
Hothouse per doz. 0 55 1 00
Axle 0 22 0 33
Screw 0 27 1 00
Awning 0 35 2 50

PUMPS.
Canadian cistern 1 80 3 60
Canadian pitcher spout 1 40 2 10

PUNCHES.
Saddler's per doz. 1 00 1 85
Conductor's 3 00 15 00
Finners, solid, per set 0 72
" hollow, per inch 1 00

RAKES.
Wood per doz. net 1 20 up

RAZORS, per doz.
Elliot's 4 00 18 00
Geo. Butler's & Co.'s 4 00 18 00
Boker's 7 50 11 00
" King Cutter 12 50 15 00
Wade & Butcher's 3 60 10 00
Theile & Quack's 7 00 12 00
Carbo Magnetic 15 00
Griffon Barber's Favorite 10 75
Griffon No. 65 13 00
Griffon Safety Razors 13 50
Griffon Strapping Machines 10 50
Lewis Bros. "Klean Kutter" 8 50 10 50
Claus, 50 and 10 per cent.
Claus Strops, 50 and 10 per cent.

REGISTERS.
Discount 40 per cent.

RIVETS AND BURNS.
Iron Rivets, black and tinned, 60 and 10 p.c.
Iron Burns, discount 55 per cent.
Extras on Iron Rivets in 1-lb. cartons, 1c. per lb.
Extras on Iron Rivets in 1/2-lb. cartons, 1c. per lb.
Copper Rivets, with usual proportion burrs, 45 per cent. Cartons, 1c. per lb. extra, net.
Copper Burns only, discount 30 and 10 per cent.
Extras on Tinned or Coppered Rivets, 1/2-lb. cartons, 1c. per lb.

ROPE, ETC.
Sisal 0 11 1/2
Pure Manila 0 14 1/2
"British" Manila 0 12
Cotton, 3-16 inch and larger 0 20
" 5-32 inch 0 25
" 1/2 inch 0 25
Russia Deep Sea 0 16
Jute 0 09
Lath Yarn, single 0 10
" double 0 10 1/2
Sisal bed cord, 48 feet, per doz. 0 65
" 60 feet 0 80
" 72 feet 0 95

RULES.
Boxwood, discount 55 per cent.
Ivory, discount 37 1/2 to 40 per cent.

SAD IRONS.
Mrs. Potts, No. 55, polished, per set 0 80
No. 50, nickel-plated, 0 90
Common, plain, 4 50
" plated 5 50

SAND AND EMERY PAPER.
B. & A. sand, discount, 40 and 5 per cent.
Emery, discount 40 per cent.
Barnet (Burtens), 5 to 10 per cent. advance on list.

SAP SPOUTS.
Bronzed iron with hooks, per 1,000 7 50
"Eureka" tinned steel, hooks " 8 00

SAWS.
Hand, Disston's, discount 12 1/2 per cent.
S. & D., discount 40 per cent.
Crosscut, Disston's, per foot 0 35 0 55
S. & D., discount 35 per cent. on Nos. 2 and 3.
Hack, complete, each 0 75 2 75
" frame only, each 0 50 1 25

SASH WEIGHTS.
Sectional, per 100 lb. 2 00 2 25
Solid 1 50 1 75

SASH CORD, 0 28 0 30

SAW SETS, per doz.
Lincoln and Whiting 4 75
Hand Sets, Perfect 4 00
X-Cut Sets, 7 50

SCALES.
Gurney Standard, 40 per cent.
Gurney Champion, 50 per cent.
Burrow, Stewart & Milne—
Imperial Standard, discount 40 per cent.
Weigh Beams, discount 35 per cent.
Champion Scales, discount 50 per cent.
Fairbanks standard, discount 35 per cent.
" Dominion, discount 55 per cent.
" Richelieu, discount 55 per cent.
Warren's new Standard, discount 40 per cent.
" Champion, discount 50 per cent.
" Weighbeams, discount 35 per cent.

SCREW DRIVERS.
Sargent's per doz. 0 65 1 00

SCREEN DOORS.
Common doors, 2 or 3 panel, walnut stained, 4-in. style, per doz. 6 50
Common doors, 2 or 3 panel, yellow and green stained, 4-in. style, per doz. 6 75
Common doors, 2 or 3 panel, in natural colors, oil finish, per doz. 8 75
3-in. style 20c. per dozen less.

SCREWS.
Wood, F. H., bright and steel, discount 87 1/2 per cent.
Wood, R. H., bright, dis. 82 1/2 per cent.
" F. H., brass, dis. 80 per cent.
" R. H., " dis. 75 per cent.
" F. H., bronze, dis. 75 per cent.
" R. H., " dis. 70 per cent.
Drive Screws, dis. 87 1/2 per cent. 3 25 4 00
Bench, wood, per doz. 4 25 5 00
Set, case hardened, dis. 60 per cent.
Square Cap, dis. 50 and 5 per cent.
Hexagon Cap, dis. 45 per cent.

SOYTHES.
Per doz. net, 6 00 9 00

SOYTHE SNATHS.
Canadian, discount 40 per cent.

SHEARS.
Claus, nickel, discount 80 per cent.
Claus, Japan, discount 67 1/2 per cent.
Claus, tailors, discount 40 per cent.
Seymour's, discount 50 and 10 per cent.

SHOVELS AND SPADES.
Canadian, discount 45 per cent.

SINKS.
Cast iron, 16 x 24, 0 85
" 18 x 30, 1 00
" 18 x 36, 1 40

SNAPS.
Harness, German, discount 25 per cent.
Lock, Andrews, 4 50 11 50

SOLDERING IRONS.
1, 1 1/2-lb. per lb. 0 37
2-lb. or over 0 34

SQUARES.
Iron, No. 493 per doz. 2 40 2 55
" No. 494 3 25 3 40
Steel, discount 80 to 60 and 5 per cent.
Try and Bevel, discount 50 to 52 1/2 per cent.

STAMPED WARE.
Plain, discount 75 and 12 1/2 per cent. off revised list.
Retained, discount 75 per cent. off revised list.

STAPLES.
Galvanized 3 00
Plain 2 80
Coopers, discount 45 per cent.
Poultry netting staples, discount 40 per cent.

STOCKS AND DIES.
American discount 25 per cent.

STONE.
Washita per lb. 0 23 0 60
Hindustan 0 06 0 07
" slip 0 09 0 09
Labrador 0 13
" Axe 0 15
Turkey 0 30
Arkansas 1 50
Water-of-Ayr 0 10
Seythe per gross 3 50 5 00
Grind, 2-in., 40 to 200 lb., per ton 25 00
" under 40 lb., 28 00
" under 2 in. thick, 29 00

STOVEPIPES.
5 and 6 inch, per 100 lengths 7 00
7 inch 7 50

ENAMELINE STOVE POLISH.
No. 4, 3 doz. in case, net cash 4 80
No. 6, 3 doz. in case, 8 40

TACKS, BRADS, ETC.
Carpet tacks, blue, 80 and 15
" tinned, 80 and 20
" (in kegs), 40
Cut tacks, blue, in dozens only 80
" 2 weights 60
Swedes cut tacks, blue and tinned—
In bulk, 80 and 10
In dozens 75
Swedes, upholstery, bulk, 85, 12 1/2 and 12 3/4
" brush, blue and tinned
bulk 70
Swedes, gimp, blue, tinned and
japanned 75 and 12 1/2
Zinc tacks 35
Leather carpet tacks 55
Copper tacks 80
Copper nails, black 55 and 5
Trunk nails, tinned, 65 and 10
Clout nails, blue, 65 and 5
Chair nails 35
Patent brads 40
Fine finishing 40
Lining tacks, in papers 10
" in bulk 15
" solid heads, in bulk 75
Saddle nails, in papers 10
" in bulk 15
Tufting buttons, 22 line, in doz. only 60
Zinc pointers' points 5
Double pointed tacks, papers 90 and 10
" bulk 40
Clinch and duck rivets 45

TAPE LINES.
English, ass skin, per doz. 2 75 5 00
English, Patent Leather 5 50 9 75
Chesterman's each 0 90 2 85
steel each 0 80 8 00

TINNERS' SNIPS.
Per doz. 3 00 15 00
Claus, discount 35 per cent.

THERMOMETERS.
Tin case and dairy, 75 to 75 and 10 per cent.

TRAPS (steel).
Game, Newhouse, discount 25 per cent.
Game, H. & N., P. S. & W., 65 per cent.
Game, steel, 72 1/2, 75 per cent.

TROWELS.
Disston's, discount 10 per cent.
German, per doz. 4 75 6 00
S. & D., discount 35 per cent.

TWINKS.
Bag, Russian per lb. 0 27
Wrapping, cotton, 3-ply 0 24
" 4-ply 0 27
Mattress per lb. 0 33 0 45
Staging 0 27 0 35

VISES.
Wright's 0 13 1/2
Brooks 0 12 1/2
Pipe Vise, Hinge, No. 1 3 50
" No. 2 5 50
Saw Vise 4 50 9 00

Columbia Hardware Co.
Blacksmith's (discount) 60 per cent.
parallel (discount) 45 per cent.

ENAMELLED WARE.
White, Princess, Turquoise, Blue and White
discount 50 per cent.
Diamond, Famous, Premier, discount 50 and
10 per cent.
Granite or Pearl, Imperial, Crescent, discount
50, 10 and 10 per cent.
Premier steel ware, 40 per cent.
"Star" decorated steel and decorated white,
25 per cent.

WIRE.
Smooth Steel Wire.
No. 0-9 gauge \$2 50
10 " 60. extra.
11 " 120. "
12 " 200. "
13 " 300. "
14 " 400. "
15 " 550. "
16 " 700. "

Add 60c. for coppering and \$2 for tinning.

Extra net per 100 lb.—Oiled wire 10c.,
spring wire \$1.25, special hay baling wire 30c.,
best steel wire 75c., bright soft drawn 150c.,
charcoal (extra quality) \$1.25, packed in cases
or cases 15c., bagging and papering 10c., 50
and 100-lb. bundles 10c., in 25-lb. bundles
15c., in 5 and 10-lb. bundles 25c., in 1-lb.
hanks, 50c., in 1/2-lb. hanks 75c., in 1/4-lb.
hanks \$1.

Fine Steel Wire, discount 25 per cent.

List of extras: In 100-lb. lots: No. 17,
\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—
No. 21, \$7—No. 22, \$7.50—No. 23, \$7.65—No.
24, \$8—No. 25, \$8.50—No. 26, \$9—No. 27,
\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—
No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,
\$17. Extras net—tinned wire, Nos. 17-25,
\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,
5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5
and 10-lb. bundles, 25c.—in 1-lb. hanks, 50c.
—in 1/2-lb. hanks, 75c.—in 1/4-lb. hanks, 100c.—
packed in cases or cases, 15c.—bagging or
papering 10c.

Brass wire, discount 60 per cent. off the list.
Copper wire, discount 60 per cent. net cash
30 days, f.o.b. factory.

Galvanized wire, per 100 lb.—Nos. 4 and 5,
\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15
—No. 9, \$2.55—No. 10, \$3.20 to \$3.20
—No. 11, \$3.25 to \$3.25—No. 12, \$2.85
—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.
15, \$4.30—No. 16, \$4.30. Base sizes, Nos.
6 to 9, \$2.27, f.o.b. Cleveland. In carlots
12 1/2c. less.

Clothes Line Wire, regular 7 strand, No. 17,
\$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow
6 strand, No. 17, \$4.30; No. 18, \$2.70; No.
19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,
Toronto, Montreal.

WIRE FENCING.
Galvanized barb, \$ 75
Galvanized, plain twist \$ 75
Galvanized barb, f.o.b. Cleveland, \$2 55 1/2
less than carlots, and \$2 45 in carlots.

COILED SPRING WIRE.
High Carbon, No. 9 \$2 70
" No. 11 2 35
" No. 12 2 85

WIRE CLOTH.
Painted Screen, per 100 sq. ft., net, 1 50
Terms, 2 per cent. off 30 days.

WASHING MACHINES.
Round, re-acting per doz. 56 00
Square " 69 00
Eclipse, per doz 48 00
Dowdell " 36 00
New Century, per doz 72 00
Connor Improved 33 00
Daisy 48 00

WRINGERS.
Leader per doz. 30 00 33 00
Royal Canadian 24 00
Royal American 24 00
Sampson 24 00
Lightning 27 00

Terms, 4 months, or 3 per cent. 30 days.
WROUGHT IRON WASHERS.
Canadian make, discount 40 per cent.

Wallace Barnes Co	1	6
Walter, E. F., & Co		8
Warminton, J. N.....	inside back cover	
Weeton, G., & Co.....		54
Wilcox Mfg. Co.....		8
Wright, E. T., & Co.....		48

CLASSIFIED LIST OF ADVERTISEMENTS.

Accountants and Auditors.

Barber, Henry & Co., Toronto.
 Fahey, Wm., Toronto.
 Hoskins, David, Toronto.
 Jenkins & Hardy, Toronto.
 Kidd, F. H., Toronto.
 Merson, Geo. O., Toronto.
 Williams, T. G., Toronto.

Anvils

Taylor-Forbes Co., Guelph, Ont.

Art Glass

St. George, H. E., London, Ont.

Ash Sifter.

Cutts, C. M., & Co., Toronto Junction.

Axes, Hatchets, Scythes, etc.

American Axe & Tool Co., Montreal.
 Dundas Axe Works, Dundas, Ont.
 Warnock, James, & Co., Galt, Ont.

Babbitt Metal.

Canada Metal Co., Toronto.
 Fairbanks Co., Montreal and Toronto.
 Syracuse Smelting Works, Montreal.

Barristers, Solicitors, etc.

Atwater, Duclos & Chauvin, Montreal.
 Beatty, Blackstock, Fasken & Riddell,
 Toronto.
 Cameron, D. O., Toronto.
 Nicholson, J. C., Toronto.
 Tupper, Phippen & Tupper, Winnipeg.
 Vidal, I. L. O., Montmagny and Quebec.

Belting, Hose, etc.

Canadian Rubber Co., Montreal and
 Toronto.
 Dominion Belting Co., Hamilton.
 Gutta Percha and Rubber Mfg. Co.,
 Toronto.
 Pullman Mfg. Co., Rochester, N.Y.
 Sadler & Haworth, Montreal & Toronto.

Bird Cages.

Wright, E. T., & Co., Hamilton.

Box Straps.

Warrington, J. N., Montreal.

Brass Goods.

Jones & Barclay, Birmingham.
 Lewis, Rice, & Son, Toronto.
 Morrison, Jas., Brass Mfg. Co., Toronto.
 Nicklin, J., & Co., Birmingham, Eng.
 Penberthy Injector Co., Windsor, Ont.
 Taylor-Forbes Co., Guelph, Ont.

Brushes and Brooms.

United Factories, Toronto.

Carpenters' and Builders' Tools and Supplies.

Baynes, Chas., Blackburn, Eng.
 Covert Mfg. Co., West Troy, N.Y.
 Fairbanks Co., Montreal and Toronto.
 Galt Art Metal Co., Galt, Ont.
 Howland, H. S. Sons & Co., Toronto.
 Hyde, F., & Co., Montreal.
 Ives, H. R. Co., Montreal.
 Lamplough, F. W. & Co., Montreal.
 Lewis Bros., & Co., Montreal.
 Lewis, Rice, & Son, Toronto.
 Lufkin Rule Co., Saginaw, Mich.
 Merrick, Anderson & Co., Winnipeg.
 Metal Shingle & Siding Co., Preston, Ont.
 Metallic Roofing Co., Toronto.
 Newman & Sons, Birmingham.
 North Bros. Mfg. Co., Philadelphia, Pa.
 Ontario Tool Co., Hamilton, Ont.
 Ormsby, A. B., & Co., Toronto.
 Pedlar People, Oshawa, Ont.
 Phillips, Chas. D., Newport, Eng.
 Smith & Hemenway Co., New York.
 Stanley Rule & Level Co., New Britain,
 Conn.
 Taylor-Forbes Co., Guelph, Ont.
 Wilcox Mfg. Co., London, Ont.

Carriage and Waggon Accessories.

Covert Mfg. Co., West Troy, N.Y.
 Lougheed, J. S., & Co., Sarnia, Ont.
 Steele, James, Guelph, Ont.

Cattle and Trace Chains.

Greening, B., Wire Co., Hamilton.
 Oneida Community Co., Niagara Falls.

Churns.

Maxwell, David, & Sons, St. Marys.

Clippers—All Kinds.

American Shearer Mfg. Co., Nashua, N.H.
 Burman & Sons, Birmingham, Eng.

Cordage.

Brantford Cordage Co., Brantford.
 Canadian Cordage and Mfg. Co., Peter-
 borough, Ont.
 Consumers' Cordage Co., Montreal.
 Hamilton Cotton Co., Hamilton.

Cork Screws.

Erie Specialty Co., Erie, Pa.

Customs Brokers.

Turnbull & Henderson, Vancouver, B.C.

Cutlery—Razors, Scissors, etc.

Birkett, Thos., & Son Co., Ottawa.
 Butler, Geo., & Co., Sheffield, Eng.
 Clauss Shear Co., Toronto.
 Dorken Bros., & Co., Montreal.
 Heinisch's, R., Sons Co., Newark, N.J.
 Lamplough, F. W., & Co., Montreal.
 Silberstein, A. B., New York.
 Smith & Hemenway Co., New York.
 Walter, E. F., & Co., Montreal.
 ■ Wiebusch & Hilger, New York.

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Belleville Business College, Belleville.
 Canadian Corr. College, Toronto.
 Metropolitan Business College, Ottawa.
 St. Margaret's College, Toronto.
 Western Business College, Toronto.

Electric Fixtures.

Morrison James, Mfg. Co., Toronto.
 Munderloh & Co., Montreal.
 Sayer Electric Co., Montreal.

Engravers.

Legg Bros., Toronto.
 Smith, Geo. J., New York.

Files and Rasps.

Barnett Co., G. & H., Philadelphia, Pa.
 Diston, Henry & Sons, Philadelphia, Pa.
 Grose, Walter, Montreal.

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Bradstreet Co.
 British America Assurance Co., Toronto.
 Canadian Bank of Commerce, Toronto.
 Confederation Life Ass., Toronto.
 Liverpool & London & Globe Ins. Co.,
 Toronto.
 London Guarantee and Accident Ins.
 Co., Toronto.
 Metropolitan Bank, Toronto.
 Western Assurance Co., Toronto.

Firearms and Ammunition.

Hamilton Rifle Co., Plymouth, Mich.
 Harrington & Richardson Arms Co.,
 Worcester, Mass.
 Iver Johnson's Arms and Cycle Works,
 Fitchburg, Mass.
 Walter, E. F., & Co., Montreal.

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Ives, H. R., Co., Montreal.

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Enterprise Mfg. Co., Philadelphia, Pa.
 Lamplough, F. W., & Co., Montreal.
 Russell & Erwin Mfg. Co., New Britain,
 Conn.
 Smith & Hemenway Co., New York.

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Sterne, G. F., & Son, Brantford, Ont.

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Auer Light Co., Montreal.
 International Gas Appliance Co., Toronto

Glaziers' Diamonds.

Sharratt & Nowth, London, Eng.
 Shaw, A., & Son, London, Eng.

Glue.

Grove Chemical Co., Lancashire, Eng.

Hardware Specialties.

Erie Specialty Co., Erie, Pa.

Horseshoe Pads.

Canadian Rubber Co., Montreal.

Horseshoes and Nails.

Canada Horse Nail Co., Montreal.

Ice Cutting Tools.

Erie Specialty Co., Erie, Pa.
 North Bros. Mfg. Co., Philadelphia, Pa.

Injectors—Automatic.

Penberthy Injector Co., Windsor, Ont.

Iron Pipe.

Page-Hersey Iron and Tube Co., Guelph.

Iron Pumps.

McDougall, R., Co., Galt, Ont.

Keys.

Millen, John & Son, Montreal.

Lanterns.

Ontario Lantern Co., Hamilton, Ont.
 Wright, E. T., & Co., Hamilton.

Lawn Mowers.

Bowman, John, Hardware and Coal Co.,
 London, Ont.
 Maxwell, David, & Sons, St. Marys Ont.
 Taylor-Forbes Co., Guelph, Ont.

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 Weese, G. A., & Son, Toronto.

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Gillett, E. W., Co., Limited, Toronto.

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Canada Foundry Co., Toronto.
 Fairbanks Co., Montreal and Toronto.
 Jardine, A. B., & Co., Hespeler, Ont.
 Kerr Engine Co., Walkerville, Ont.
 Morrow Machine Screw Co., Ingersoll, Ont.
 Ontario Wind Engine and Pump Co.,
 Toronto.
 Penberthy Injector Co., Windsor.

Mantels.

Batty Store and Hardware Co., Toronto.

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Metals.

Booth Copper Co., Toronto.
 Canada Iron Furnace Co., Midland, Ont.
 Canada Metal Co., Toronto.
 Deseronto Iron Co., Deseronto, Ont.
 Gibb, Alexander, Montreal.
 Gilbertson, W., Pontardawe, Wales.
 Hankin, F., Montreal.
 Ironside, Sen & Co., London, Eng.
 Jackson, C. F., & Co., Vancouver, B.C.
 Kemp Mfg. Co., Toronto.
 Leslie, A. C., & Co., Montreal.
 London Rolling Mills Co., London, Ont.
 Lysaght, John, Bristol, Eng.
 Morton, B. K., & Co., Sheffield, Eng.
 Nova Scotia Steel and Coal Co., New
 Glasgow, N.S.
 Rogers, Henry, Sons & Co., Montreal.
 Samuel, Benjamin & Co., Toronto.
 Thompson, B. & S. H. & Co., Montreal.

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Metallic Roofing Co., Toronto.
 Pedlar People, Oshawa, Ont.

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 Falkner, H. F., Toronto.
 Oakley, John, & Sons, London, Eng.

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Cutts, C. M., & Co., Toronto Junction.

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 Kemp Mfg. Co., Toronto.
 McClary Mfg. Co., London, Ont.

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Daivson Mfg. Co., Brooklyn, N.Y.

Office Furniture.

Office Specialty Mfg. Co., Toronto.

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 Canada Paint Co., Montreal.
 Canadian Oil Co., Toronto.
 Consolidated Plate Glass Co., Toronto.
 Doda, P. D., & Co., Montreal.
 Imperial Varnish and Color Co., Toronto.
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 Lucas, John, & Co., Philadelphia, Pa.
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 Ramsay & Son, Montreal.
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 Thorne, R. E., Montreal.
 Winnipeg Paint & Glass Co., Winnipeg.

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 over, Ont.
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 McArthur, Alex., & Co., Montreal.
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 Paterson Mfg. Co., Toronto & Montreal.
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 Gurney Scale Co., Hamilton, Ont.
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 Hyde, F., & Co., Montreal.
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Atlas Mfg. Co., New Haven, Conn.

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 Weeton, G. Mfg. Co., Toronto.

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Montreal Steel Works, Montreal.

Steel Rails.

Algoma Steel Co.—Drummond, McCall
 & Co., Agents, Montreal.
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 Morton, B. K., & Co., Sheffield, Eng.
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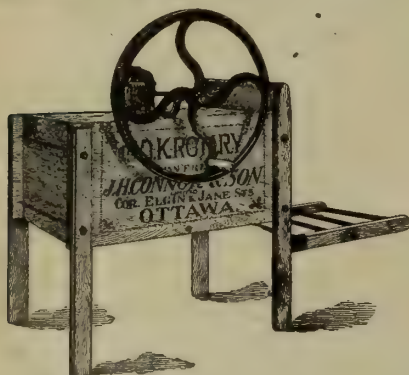
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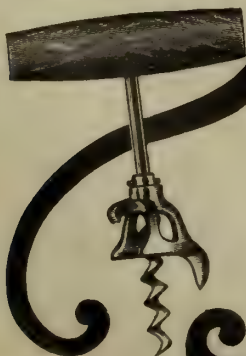
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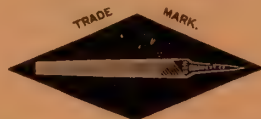
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A Weekly Newspaper devoted to the Hardware, Metal, Machinery, Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, OCTOBER 8, 1904.

NO. 41

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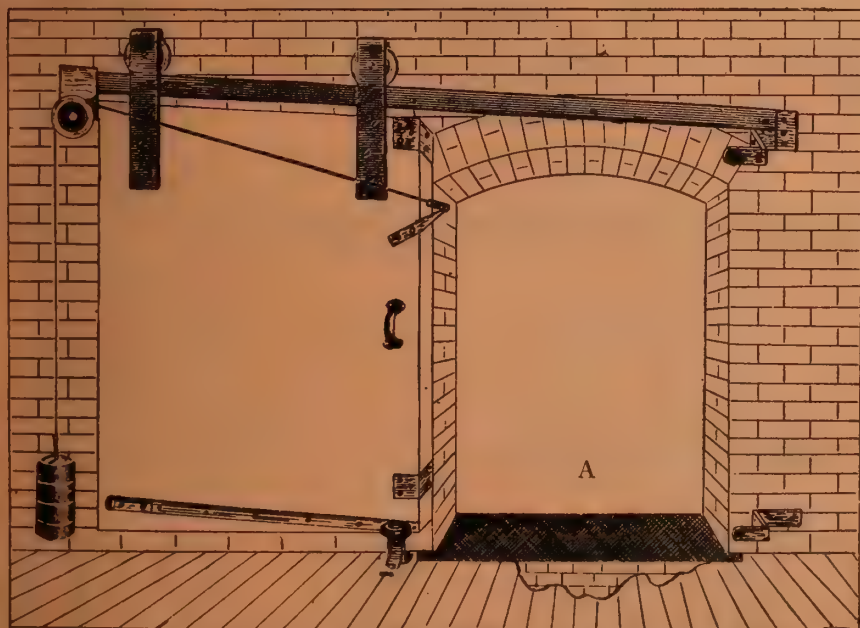
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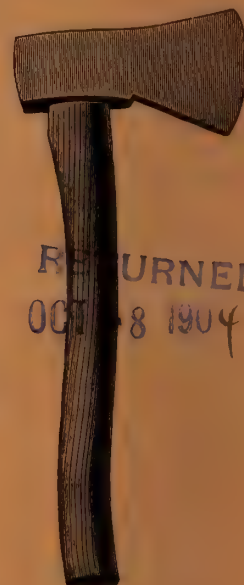
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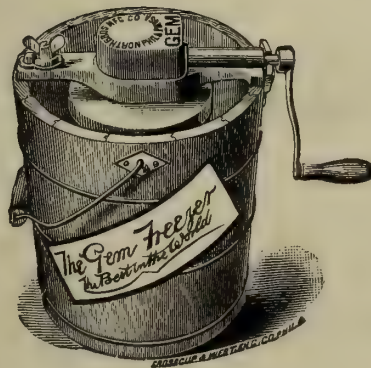
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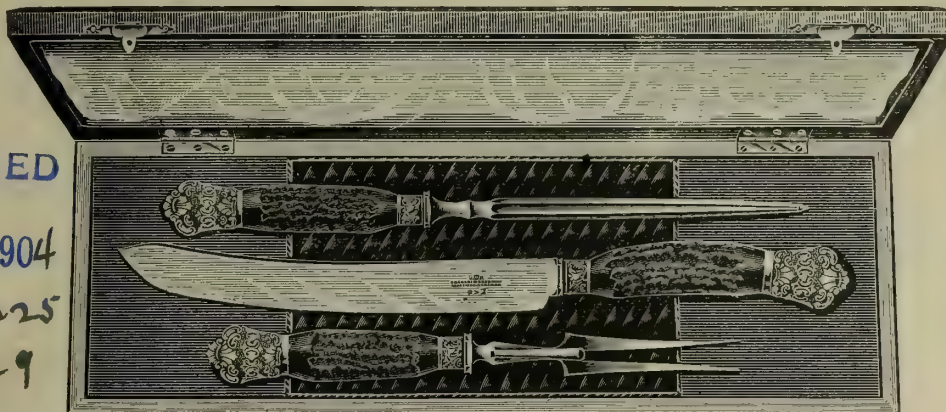
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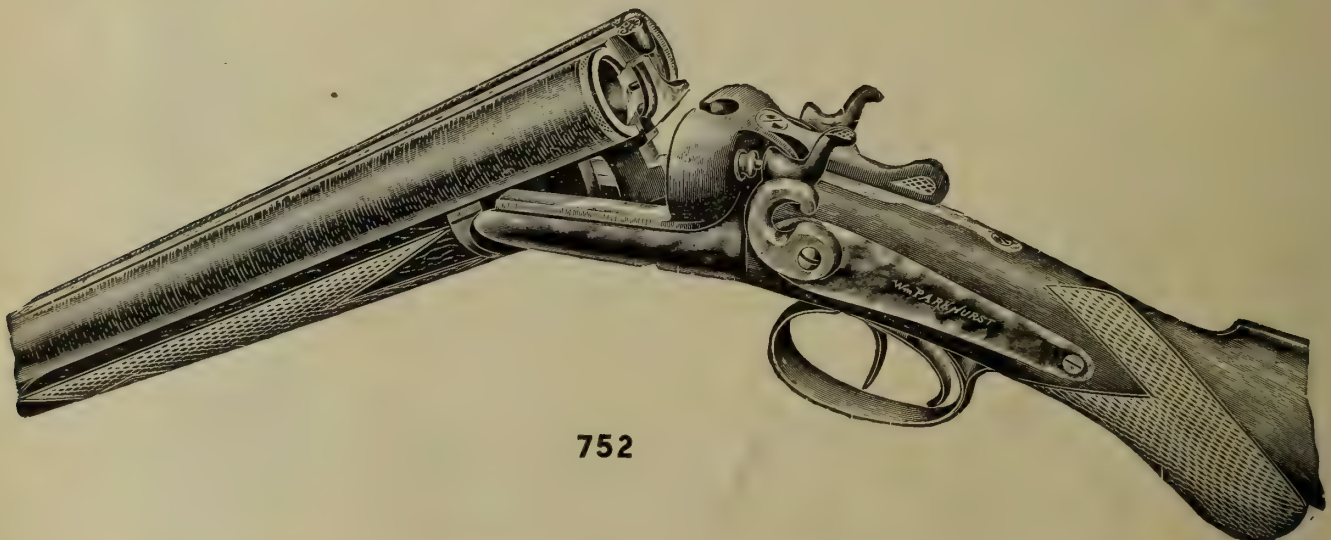
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Bown's "Newmarket" Clipper.

The Improved B. PATTERN "NEWMARKET"

Detachable Plates.
Improved Cap with Long
Bearing.
Rigidity and Easy Running.
Accurately Machined and
Perfectly Fitted.

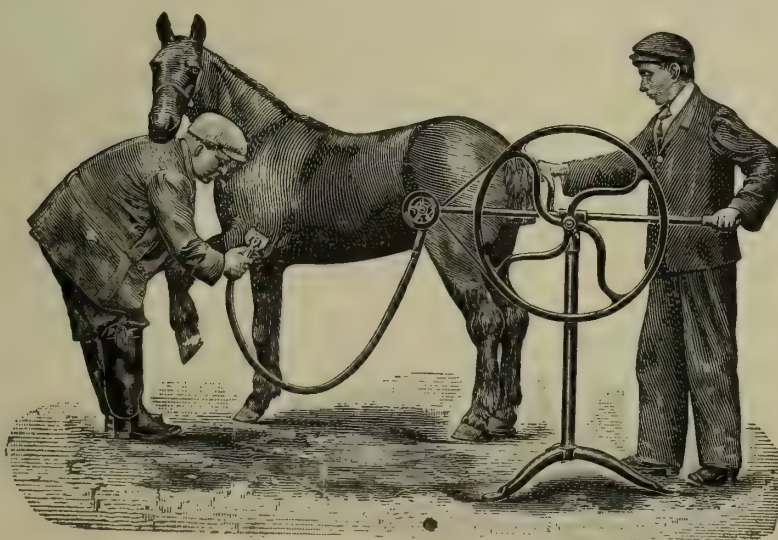
ALL PARTS INTERCHANGEABLE.



The "Handicap" Clipper.
The cheapest centre-adjustment clipper made.

Our goods are stocked by all the leading Jobbers throughout the Dominion.

*For Beauty of
Design
and
Superiority
of
Workmanship*



*The "NEWMARKET"
POWER CLIPPER
stands
Supreme
and
Unassailable.*

The "Newmarket" Power Clipper.

Strong and Reliable.

Speedy and Durable.

Simple and Effective.

BURMAN & SONS, Limited, LEE BANK WORKS, BIRMINGHAM
ENGLAND



**Come Out
OF THE
DARK!**

Bring your "ads"
with you.

ILLUSTRATE!!

By doing so you illumine and release from obscurity many a cheerless "type ad" that is suffering for the want of a little pictorial light.

We furnish the kind of pictures that give to your "ads" a bright and smiling countenance. A cheerful face gains favor every time.

Estimates on all and every style of design cordially furnished.

**ART DEPARTMENT
MacLEAN PUBLISHING CO.**

LIMITED

Montreal, Toronto, Winn.peg.

WE make a new form of Headless Set Screw. The screw-driver cannot slip and burr the ordinary Headless Set Screw. The screw-driver cannot slip and burr the thread—the strength is all there, and they are reasonable in price. You can have samples and prices for the asking.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.

Established 1815



Agents for Canada: **A. Ramsay & Son Company, Montreal**

GLAZIERS' DIAMONDS



Ahead of all others in quality and workmanship. If sparks of fine quality, set by experts, are what you require, buy Diamonds of A. Shaw & Son's make.

Canadian Agent

GODFREY S. PELTON

388 ST. PAUL ST., MONTREAL



Clauss Brand

Double Swedged Blade

Pocket Scissors.

FULLY WARRANTED

Hand forged from finest steel. Welded on our Composition Metal. Hardened in water. Tempered by Natural Gas. Full Crocus Finish and Finely Nickel Plated.

I. A. TOBIAS,
Canadian Agent.

THE CLAUSS SHEAR CO., 169 Spadina ave.,
TORONTO

CELEBRATED

HEINISCH SHEARS

Tailors' Shears,
Trimmers' Shears,
Tinnners' Snips, etc.



ACKNOWLEDGED THE BEST.

R. HEINISCH'S SONS CO.

NEW YORK OFFICE, 155 Chambers St.
NEWARK, N.J., U.S.A.



SEYMOUR SHEARS

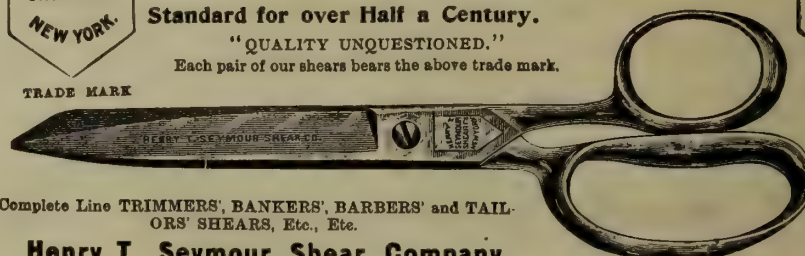
HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



TRADE MARK

Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.

Latest Catalogue will be sent in exchange for your business card.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the
NIAGARA WIRE LINK
OPEN RING TYPE.

Also made in CLOSED RING, THREE CHAIN
and DOMINION (or "Short") TYPES.

Oneida Community Cow Ties can be had of all
the leading jobbers. We invite correspondence
where any difficulty is experienced in obtaining
our goods.

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

When you see the word

GURNEY

You invariably think of

SCALES

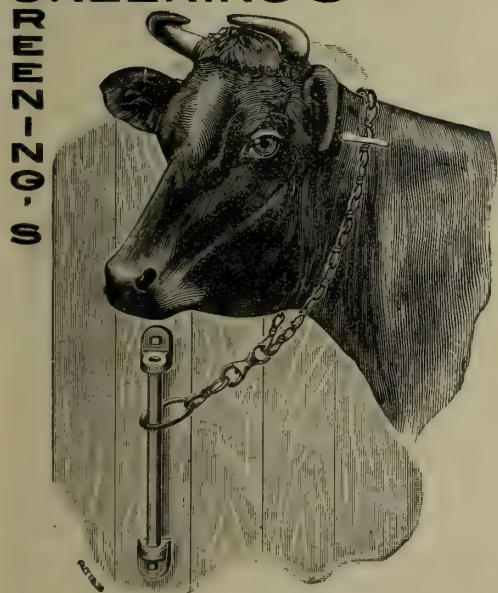
We make scales of every description—from
the sensitive postal scale up to the giant coal
scales. The same quality of exactness in
them all.

When interested in scales, write us. Send
for our Catalogue in the meantime.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse: Western Warehouse:
The Gurney-Massey Co., Limited The Gurney Stove and Range Co.
Montreal, Que. Winnipeg, Man. Limited,

GREENING'S



PATENT COW TIES.

These Cow Ties
have stood the
test for years.
Undoubtedly the
best and strong-
est on the mar-
ket.

It will pay to handle only the best.

A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

THE B. GREENING WIRE CO.,
Hamilton, Ont. Montreal, Que. LIMITED

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.**

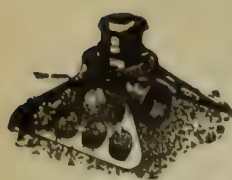
WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.
MONTREAL and TORONTO LIMITED



"Pullman"
Lawn Sprinkler
IS YOUR
ORDER IN ?
Send for Folder No.14.
PULLMAN MFG. CO.
Rochester, N.Y., U.S.A.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of FLATWARE, CUTLERY and
ELECTRO PLATE.

Ask for our Catalogue and Quotations.



Dundas Axe Works

DUNDAS, CANADA.

Write for Prices

P. BERTRAM, - Manager.

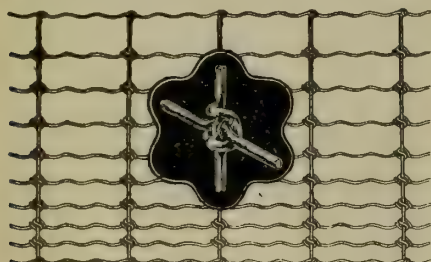
Do You Use

STENCILS

We can certainly interest you
if you do. Our work is guaran-
teed, and prices on the low side.

THE SUPERIOR MFG. CO.

58 Adelaide St. W., TORONTO.



IDEAL FENCING

Is Strong and Durable, because Large Gauge (No. 9) Steel
Galvanized Wire is used throughout. SEE OUR EXHIBIT
AT PRINCIPAL FAIRS, or write for Catalog.

Write for Catalogue.

The McGregor-Banwell Fence Co., Limited,
WALKERVILLE, ONT.

Merrick, Anderson & Co., Winnipeg, Man.
Sole agents for Man. and N.W.T.

A FULL LINE OF

Wire Springs

FOR THE

Carriage and Furniture Trade

JAS. STEELE, Guelph, Ont.

A SAMPLE ORDER SOLICITED,

Montreal Steel Works, Limited

AGENTS FOR

THOS. FIRTH & SONS., LTD. SHEFFIELD, ENG.

Tool Steel Axe Steel Double Shear Steel Blister Steel
Firth's Speedicut High Speed Steel Pivot Valve Steel Files, Etc.

Canal Bank, Point St. Charles, - MONTREAL

The Points of Difference

between ordinary Fire Brick and Sterne's Asbestos Stove Lining: costs less; always
ready for use; fits any stove; conforms to irregular surfaces, no matter how badly
warped; can be easily applied; does not burn out; clinkers will not adhere to it.

Surely a formidable list of advantages for

STERNE'S ASBESTOS STOVE LINING

ORDER DIRECT

CIRCULAR ON REQUEST

G. F. STERNE & SON, Sole Makers, Brantford, Ont.

J. H. HANSON, Eastern Agent, 422 St. Paul St., MONTREAL.

SPRINGS

FLAT.—SPIRAL OR VOLUTE

INTERESTING CATALOG MAILED ON APPLICATION

THE WALLACE BARNES CO.

BRISTOL CONN.

DILLON-HINGE-STAY

Why handle Barb and Coiled Wire at no profit when
you can have a fair margin on our

Dillon Fencing



Got up specially
for the hardware
trade.

Easily put up
and at the most mod-
erate prices.

Write for prices in car or small lots.

CAVERHILL, LEARMONT & CO.,

Montreal and Winnipeg
Eastern and Western Agents

OWEN SOUND WIRE FENCE CO., Limited

Owen Sound, Ont.

Cordage

Of every description.

Net Mountings,

Sand Line,

Unoiled Cordage,

Marline,

Extra Long Lengths,

Ratline,

Shingle Yarn.

Core Rope,

Oil Well Cables,

Russian Packing,

DeeP Sea Lines,

Anchor Line,

Good Transmission Rope,

Engine Packing.

Clothes Lines,

Only Best Material Used.

Log Line

Twine.

Dangerous to use Inferior Cordage.

Mail

Orders

Now

To us and

Recieve

Exceptional

Attention.

Low-priced goods are not always
the cheapest.

TRUE BRAND



CUTLREY

POCKET CUTLERY, RAZORS, SCISSORS,

QUALITY GUARANTEED

BEST GOODS

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., Montreal

PRICE is a good thing,—but,
QUALITY is better.

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.



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CAMPAIGN TORCHES

Tin. Large Oil Font. Long Wooden
Handles. Double Swivels. Screw
Burners. Complete with Wick.

We can supply YOU with your requirements in this
line promptly, and we will be pleased to quote you.

KEMP MANUFACTURING CO., TORONTO, Canada

Canadian Trade Outlook in Japan

By Alexander MacLean, Canadian Commercial Agent
No. 14 Bund, Room B., Yokohama

THE bicycle prospect in Japan is one on which the bicycle interest in Canada will expect me to throw some light.

Yokohama is the port of entry for a city and suburban population of about two millions including the million and a half of Tokio. And to these are to be added the millions of people in the lesser cities and of the country districts of northerly and north Japan. Bicycles in the Customs returns are grouped with other things, and when that is the case, as it is with many articles, special reference and sorting out at the Customs records is the only way to be specific. I am, therefore, able just now to be specific with regard to the bicycle trade as it appears only at Yokohama:

1902.	Number.	Value.
United States	11,336	\$219,676
England	197	5,714
Canada	209	5,503
Germany	30	907
France	4	179
Philippines	6	90
	11,782	\$232,132
1903.	Number.	Value.
United States	10,073	\$213,410
England	730	21,930
Germany	93	1,852
Canada	74	1,862
France	3	117
	10,978	\$239,171

The figures here show a falling off in number, but an increase in value, which latter is probably due to the enhanced appreciation of the English article, which is better and more costly than its chief competitor, the American. The weakness of the trade is alleged to have for its chief cause the action of the Government factory at Tokio. The Government manufacture is of course for military purposes, and not for public sale; but wheels can be had upon making application, at prices according to quality, 70, 90 and 120 yen each, or

\$35, \$45 and \$60 Canadian currency, which is net cost; and the charge is that many take advantage of this opportunity.

But it is rather probable that the weakness of the trade has other causes not so easily confessed to. When there is contentment with such trade as comes along, if not a seeming indifference as to whether it comes or not, its slowness cannot be better accounted for. It is talk of the trade that American wheels are losing favor and that the preference is going to the more substantial and lasting English manufacture.

GREAT FUTURE FOR THE BICYCLE.

The Japanese did not take to the bicycle at first. Why not, was of course more easily remarked than explained, as is usually the case when they don't fall into line with the foreigner. But that is said to be changing, and there are many who consequently predict a great future for the bicycle in this country. In this business there is a "ground floor" to get on to; and those who come early, fully determined to win a good reputation, will be there to occupy it. The practical nothingness of the Canadian bicycle trade here is consistent with the impression that I received in Canada before leaving; that the bicycle trade, like the wire trade and doubtless others, was not free but bound; that it had its allotment of territory or its measure of output, and must rest and be thankful, which is an industrial condition very well understood now-a-days.

There are highly respectable houses here mentioned in connection with the bicycle trade; but what this branch, like all Canadian trade needs, is some special means with energy behind it to keep it to the front.

PLATED WARE.

Silver plated ware manufacturers whom I saw in Canada were desirous to hear something of the outlook for their

goods in Japan. I have an inquiry, also in this line, from a representative in Australia of a Canadian company, who is doubtless desirous to take in Japan with Australia.

IMPORTS OF ELECTRO-PLATED WARE.

The importation of electro-plated ware at Yokohama for 1903 was of the value following:

Silver plate	\$8,925
Gold plate	1,451

	\$10,376

COUNTRIES WHENCE IMPORTED.

The countries whence imported are as follows:

England	\$5,296
France	3,208
United States	1,311
Germany	130
Other countries	204

TOTAL IMPORTATION INTO JAPAN.

The total importation into Japan for the year amounted to 30,224.11 yen (\$15,112.06). Imports for all Japan of gold and silver plated ware are:

For 1898	\$ 5,008
1899	6,053
1900	12,888
1901	9,207
1902	9,435
1903	15,112

These figures include both gold and silver plated ware; separate returns not being available, since the duty, 25 per cent. is the same for both. The duty on gold and silver ware, not otherwise provided for, is 35 per cent.

These importations are not large, but the figures are growing, having trebled within the last six years. This rapid rate of increase may be checked as one of the incidents of the war; but the field is well worth cultivating now, so as to be in it after the war.

ENAMELLED WARE.

I have also at hand some requirements of information as to the market for enamelled ware, including kitchen utensils.

The total importation of these goods for Japan last year was:

From Austro-Hungary	\$ 535
From Belgium	559
From France	1,712
From Germany	9,316
From United States	4,344
From Other Countries	146

	\$25,452

FOREIGN TRADE OF JAPAN.

The July "Monthly Return, of the Foreign Trade of the Empire of Japan," summarizing the trade of the first six months of the current year, shows a marked increase of both exports and imports:

Total exports, first six months, 1904..	\$ 79,919,680
" " 1903..	74 260,784

Increase, exports this year.....\$ 5,658,896

Total imports, first six months, 1904..	108,030,992
" " 1903..	97,012,003

Increase, imports this year\$ 6,018,989

Total increase, 1904 over 1903.....\$ 11,677,885

WAR HAS NOT RETARDED FOREIGN TRADE.

The Nichi Nichi, a leading Japanese newspaper, in Tokio, in an article reviewing the contrast presented by the trade and industrial conditions of Japan and Russia respectively, as shown by these and other returns, argues: "It will thus be seen that the war has not only not retarded Japan's foreign trade, but that the latter has shown an increasing growth and prosperity in spite of the war." Another evidence of Japan's confidence in the ultimate if not early outcome of the existing hostile relations, is the announcement of the leading native bank, the Yokohama Specie Bank, of the opening of a branch at Dalny, and the reopening of a branch at Dalny, and the reopening as important Manchuria stronghold lately wrested from Russia.

SOLE LEATHER.

The importers of sole leather are desirous to learn what Canada has to offer in their line.

Importations of sole leather for three years past tabulate as follows:

From—	1901	1902	1903
Australia.....	\$ 43,418	\$ 43,788	\$ 835
Germany.....	20,145	30	.....
Great Britain..	668	1,964	3,608
United States..	230,962	219,735	301,076
Other countries	162	179	165
	-----	-----	-----
	\$265,355	\$265,696	\$305,684

For the six months of the current year, ending June 30, the sole leather importations into Japan amounted to 555,510 yen or \$277,755 Canadian currency; the United States continuing to

lead, and the other countries to fall off The qualities imported from the States are:

1st, f.o.b. San Francisco, 25 to 26 cents gold.

2nd, f.o.b. San Francisco, 22 to 23 cents gold.

3rd, f.o.b. San Francisco, 19 to 20 cents gold.

This price is per pound.

The wholesale selling price in Yokohama is about as follows:

1st quality, 133 pounds....	yen 85.00 or \$42.50 gold
2nd " "	80.00 or 40.00 "
3rd " "	75 00 or 37.50 "

SECOND QUALITY HAS BEST SALE.

The second quality has the greater sale. The Government is at present buying considerable of the imported article because the Japanese tanneries are unable to supply its requirements. The native leather is produced mostly at Tokio and Osaka, from native beef hides and from hides imported from China in a dried state.

DUTY ON SOLE LEATHER.

The duty on sole leather amounts to \$5.07 gold per 133 pounds under the general tariff, and \$2.85 per 133 pounds under the conventional tariff. The Canadian imports are subject to the former rate.

There are many high class firms in the leather trade as a branch of their business.

BELTING.

Belting is a commodity analogous to that of sole leather. A Montreal belting manufacturer makes inquiry; and there are agencies in British Columbia that seek information. There is a good deal of machinery running in Japan, and the ambition of this people to imitate and excel in the manufacturing way lends color to the prospect of a good outlet ultimately for a share of the hides that the vast area from Winnipeg to the Rocky Mountains must soon be producing.

IMPORTS OF BELTING.

The imports of belting by countries for 1903 at the port of Yokohama follow:

England—

Leather	\$2,143
Hair	7,945
Rubber	3,959
Canvas	9,093
Cotton	742
Canvas and Rubber ..	2,186

----- \$26,068

United States—

Leather	\$1,049
Rubber	3,458
Canvas	1,547
Cotton	591

	6,645

Germany—

Canvas	\$ 382
Hair	1,005

	1,387

	\$34,100

TRADE WORTH CONSIDERATION.

The importations at the other ports are not available unless upon special inquiry because belting and hose are not separated. That the trade is worth looking after is shown by the attention given to it by a large number of high class firms.

Intending leather and belting exporters in Canada can have such further information as they may require, and can be put into communication with the trade in this country by corresponding with this office.

WIRE NAILS.

For the information of the Canadian nail trade it should be remarked that the consumption in Japan is increasing year by year. The supply comes mainly from the United States and Germany. The imports from countries for 1903 were as follows:

	Pounds.	\$
United States ..	20,924,424	386,546
Germany	18,042,518	343,162
Belgium	657,389	13,548
Great Britain ..	473,708	10,908
France	6,107	298
	-----	-----
	39,104,146	754,462

ALLEGED UNDERSTANDING CONCERNING PRICES.

The United States and German manufacturers are thought to have an understanding that governs prices and shipments. The rise and fall in prices with them are reciprocal as to time and

WIRE NAILS TACKS WIRE

Prompt Shipments

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

amount, and quotations are practically the same. The Belgian nails are the cheapest, but the quality is poor. Those from Great Britain are the best.

The jobbers' prices of United States nails at present can be estimated by the trade from the following: 12 gauge, 2 1/2 inch, per keg, 5.80 Yen, or \$2.90 gold; with the usual gradation of price and size to 5 gauge, 7-inch, per keg 5.50 Yen, or \$2.75. These figures are "duty paid."

DUTY ON WIRE NAILS.

The duty on wire nails, is 29 cents, Canadian currency, per keg. Nails for this market should be packed in extra strong kegs, 134 pounds net in each, kegs pitch-paper lined so as to protect against rust in this humid climate. If allowed to become rusted they sell as damaged stock.

A Japanese interest in Tokio has established a wire nail factory, the full capacity of which is about ten thousand kegs per year. This as yet scarcely enters into competition with the imported article.

CATALOGUES, BOOKLETS, ETC.

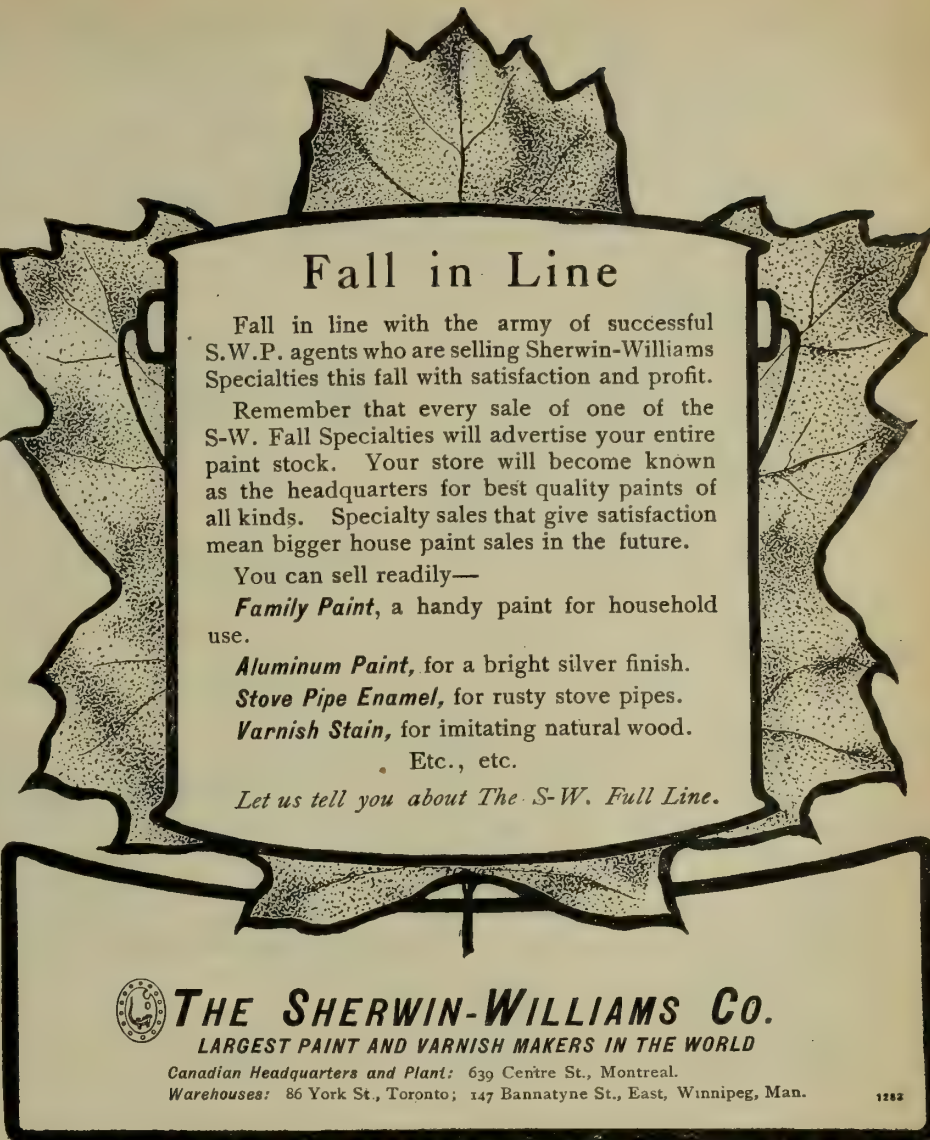
For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Jones & Lamson.

AMONG the many handsome and high-class machinery catalogues received by **Hardware and Metal**, the one recently issued by Jones & Lamson, Springfield, Vt., stands in a very favorable light. It is handsome in appearance and the subject matter is well arranged. The Hartness flat turret lathes are described and illustrated. The special features are brought out and the details shown in a clear manner, which emphasizes the fact of the claim that this machine has on the manufacturers and machinists. All users of machinery and intending purchasers should have a copy of this catalogue.

Canton Foundry and Machine Co.

The Canton Foundry and Machine Co., East Eighth street and South Saxton street, Canton, O., have issued a catalogue for general distribution to foundrymen in Canada and the United States. Their line of goods includes conductor pipe and eavetrough machinery, wire eavetrough hanger machinery, metal ceiling and sheet stamping machinery, paint mixers, paint rolls, etc., black-



Fall in Line

Fall in line with the army of successful S.W.P. agents who are selling Sherwin-Williams Specialties this fall with satisfaction and profit.

Remember that every sale of one of the S-W. Fall Specialties will advertise your entire paint stock. Your store will become known as the headquarters for best quality paints of all kinds. Specialty sales that give satisfaction mean bigger house paint sales in the future.

You can sell readily—

Family Paint, a handy paint for household use.

Aluminum Paint, for a bright silver finish.

Stove Pipe Enamel, for rusty stove pipes.

Varnish Stain, for imitating natural wood.

. Etc., etc.

Let us tell you about The S-W. Full Line.

THE SHERWIN-WILLIAMS CO.
LARGEST PAINT AND VARNISH MAKERS IN THE WORLD
Canadian Headquarters and Plant: 639 Centre St., Montreal.
Warehouses: 86 York St., Toronto; 147 Bannatyne St., East, Winnipeg, Man.

smiths' forges, car wheels, turntables, shears, etc., etc. This firm's goods are recognized as standard so any of the trade using these goods should secure their catalogue.

Something Pneumatic.

The September issue of "Something Pneumatic," issued by the Chicago Pneumatic Tool Co., Fisher Building, Chicago, is well worth reading. The contents include illustrations of mechanical stokers, pneumatic drills, hammers, sand rammers, hoists, etc. The book is one that all large foundrymen and machinists will be largely interested in.

IN THE WRONG DEPARTMENT.

A prominent physician tells this story at the expense of the modern craze for specialization in the medical profession: A poor woman from the East Side of New York went to a near-by dispensary

to ask aid for her little son, who had one of his fingers smashed with a baseball bat. At the first room where she applied she was told by a curt attendant that the boy could not be treated there.

"Wrong place," he explained, "this is the eye and ear department."

"Vere is der thumb und finger department?" inquired the woman, simply.

REPUBLIC SHEET BAR MILL.

We can state with confidence that the Republic Iron and Steel Co. will go ahead promptly with its sheet bar mill project, and will probably be able to ship sheet and tin plate bars early in the new year.

Contracts for a good part of the equipment have, it is understood, been let, but details as to the design of the mill, etc., are withheld for the immediate present. It is understood, also, that the company has already booked considerable tonnage pending the completion of the mill.—The Metal Market.

THERE is no lack in the number of men able to write good "copy."

One has but to pick up the magazines, or the newspapers, and read the advertisements of the larger advertisers to discover how smooth the style is, how aptly everything is expressed, how interesting is the story. One is pretty safe in concluding that every bit of such advertising has been prepared by the trained writer,—a man whose daily task is a traffic in words. If follows with all certainty that the man skilled in the choice of words, who has learned the economies of speech, whose mind is concerned with the problem of influencing other minds, to persuade them to buy the things whereof they write,—it follows that such a man can write advertisements infinitely better than can he who takes up his pen reluctantly and who labors long and hard in an effort to write a good advertisement. Every man to his trade. It is strictly business for the merchant who feels that he cannot prepare good copy to entrust this work to a trained writer. It will cost money to give out this work—\$5 a month, \$10 a month, \$25 a month,—but it will be money well spent. The good that will result from the work of the trained writer may not be perceived immediately, but the effect and the returns are as certain as the sunrise.

Proofs of the rightness of such a declaration are readily forthcoming. The writer has in mind the case of a grocer in a Canadian city whose advertisements are being prepared by a professional writer who resides many hundreds of miles away. The advertisement appears daily, and is of small size, but it stands out sharp and clear on a page that is given up entirely to advertising. This merchant pays \$5 a month for the service given. He supplies an outline suggestion of what he wishes advertised and leaves the rest to the man whom he employs to prepare his advertisements. The results have been satisfactory in the highest degree, and the \$5 charge is paid with genuine pleasure. This man's advertising has a freshness, a directness, a charm not found in his competitors' announcements of larger size. This store has acquired a reputation for goodness that stands it in good stead every day of the year. The proprietor who before was not more aggressive than his fellow merchants has caught the enthusiasm of his own advertising, and has responded to its spirit of superiority. His windows are better dressed, his counters have been made more inviting. His salesmen have smartened up. The good done him and his business has evidence in the daily sales, and the prospects of this store are of the brightest. It is upwards of a year since the new influence began to be exerted.

Hammer the Hammer



A Life Saver.

Any revolver that can be handled in this manner is safe under any and all conditions. Safe to use, safe to carry, safe to stock your warehouse with. Just as safe to sell as it is to own. Dead stock is not any part of the **IVER JOHNSON** policy. They manufacture the article and then create the demand for it by making the best and advertising it extensively. A sane business man cannot afford to sell any other. What his customers require he should sell. Revolver buyers are now demanding the

IVER JOHNSON.

SEND FOR LITERATURE.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

It has cost the merchant so far \$50 for the service of an expert. He has made several times that amount in extra profits, and has given a spurt to his business that is worth no small sum.

This history can be repeated in hundreds of instances, and one of the gratifying signs of the times is that merchants in all parts of the country are inquiring for the names of specialists for the preparation of their advertisements.

FARWELL—BROWN.

A QUIET home wedding took place yesterday at the residence of Mrs. T. A. Brown on Wellington street, when her daughter, Miss Clara E. Brown, was united in marriage to Roy S. Farwell, of Farwell & Co., hardware dealers, Sault Ste. Marie. The ceremony was performed by the Rev. E. I. Hart, pastor of the Central Methodist Church, in the presence of a few of the immediate relatives and friends of the bride and groom, who were unattended. Following the wedding breakfast the young couple left per C. P. R. steamer Manitoba for Hamilton, where they will take up their residence. Roy S. Farwell, the groom, is well known in the Soo. Previous to last Spring he was a resident of the town as active member of the firm of Farwell & Co.,

hardware merchants, and was numbered among the Soo's most energetic young business men. His departure from town was occasioned by his purchase of a hardware business in Hamilton. The bride has been a resident of the Soo since girlhood and has a host of friends here who join in wishing the young couple long and happy life.—Sault Ste. Marie Ex.

THE STEEL TRUST REVENUE.

For the nine months of the calendar year ending Sept. 30, the United States Steel Corporation has made approximately \$50,690,000 net. This compares with \$94,333,970 the first 9 months of 1903 and \$101,323,104 the first nine months of 1902, and nearly 50 per cent. below the high record of 1902, and over 40 per cent. below the returns of the year 1903. While the net returns for the nine months show so unfavorably compared with the figures of last year, conditions October 1 last year and this year are vastly different. The fourth quarter of 1903 was the worst of the year. The outlook for future business was gloomy. The net returns for the month of December reached the low record of \$3,292,139, nearly 300 per cent. below the best month of the year. This year the fourth quarter will open with mills running above 70 per cent.

H. S. HOWLAND, SONS & CO. LIMITED

Wholesale
only

TEMPORARY WAREHOUSE:
212-218 COWAN AVENUE, TORONTO.

Only
wholesale

Sample Room at 21 SCOTT STREET, Telephone Main 4056.

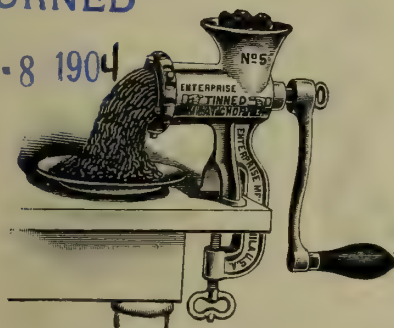
Telephone:—Office, Park 1584.

(Where orders may be left if not convenient to visit our Warehouse at Parkdale.)

Telephone:—Warehouse, Park 1585

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OCT -8 1904



"ENTERPRISE."
To Clamp to Table.

Meat Choppers, etc.

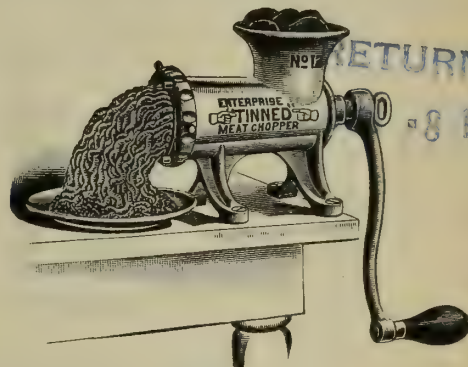
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Page 11



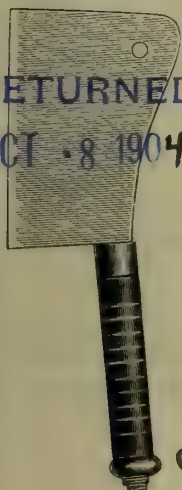
STUFFEN ATTACHMENT.



"ENTERPRISE."
To Screw to Table.

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OCT -8 1904



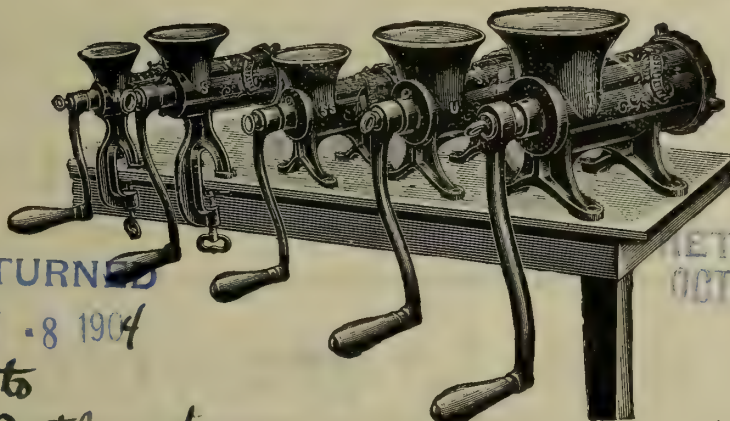
CLEAVERS.

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OCT -8 1904

to

Mr Bartlem of
H. S. Howland & Son



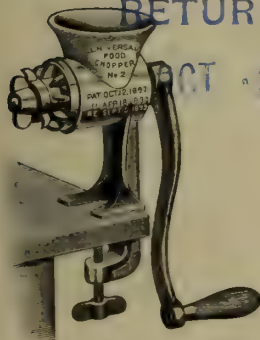
"ALEXANDERWICK."



CHOPPING BOWLS.

RETURNED

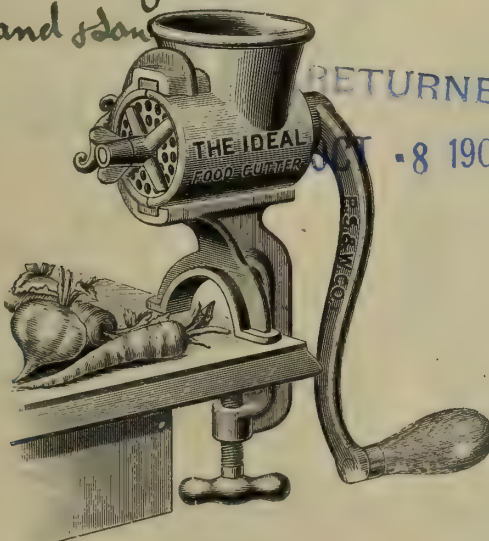
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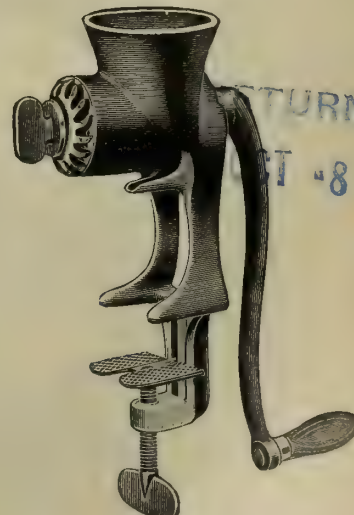
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"THE IDEAL."



"CLASSIC."

For other lines see our Hardware Catalogue.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

Made in Canada

The steel rail mill of

The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.

is now in operation and turning out

A. S. C. E.
Standard
Section

STEEL RAILS

of
Highest
Quality

Your specification will have our best attention.

Offices:

Canada Life Bldg.,
MONTREAL

100 King St. West,
TORONTO.

Drummond, McCall & Co.

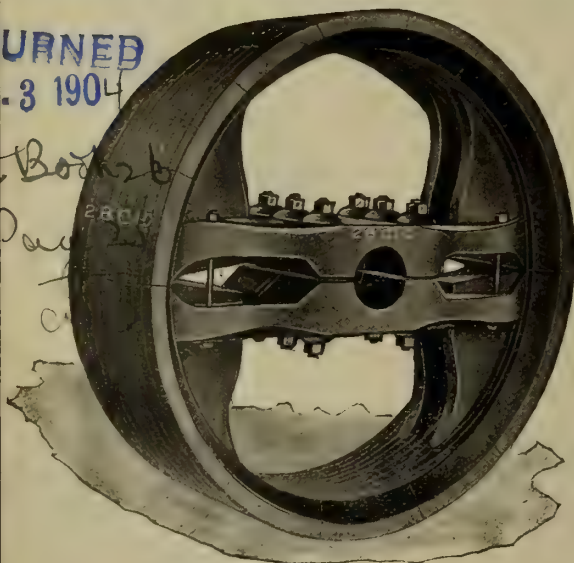
General Sales Agents

The Algoma Steel Co., Limited

If you want to end your troubles

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NOV. 3 1904

Cut Book 26
Page 22
C



In the pulley line there is only one way to do it and that is by ordering

FAIRBANKS'
WOOD — SPLIT
PULLEYS
MADE IN MONTREAL

They are really so far ahead of other wood split pulleys that they should be classed by themselves. They are built to last and every time you put a Fairbanks pulley on a shaft you can rest assured that it is there to stay and you needn't worry about it slipping or "giving out," experiences you have probably had with other pulleys.

Send for circulars and let us prove what we say.

THE FAIRBANKS COMPANY

MONTREAL.

TORONTO.

WINNIPEG.

VANCOUVER.

MACHINERY

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, Oct. 6, 1904.

SINCE the announcement of the dissolution of Parliament and the naming of the day for the approaching elections, parliamentary affairs have loomed up much to the exclusion of ordinary business. The machinery market has been somewhat less brisk this week, owing to the general uncertainty prevailing. There are no large undertakings under way and none are expected until after the elections. There is a fair amount of business passing in smaller and medium-sized orders. September has been a good month for manufacturers and machinery dealers, but October has started in a manner that indicates a slight falling off for this month.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East.
Toronto, Oct. 7, 1904.

THIS market in general continues active this week. Woodworking machinery and engines and boilers have had a very good run, and local dealers have handled several large orders. Iron working machinery is not so active, but there are a few engines being made.

The demand for electrical machinery continues very good, and local factories are very busy.

Extension to Allis-Chalmers-Bullock Works.

NUMEROUS improvements are now in course of completion at the Allis-Chalmers-Bullock Co.'s new works at Rockfield, Que., including the erecting of a large electrical building and a complete change in the power plant.

The completion of the electrical building which is sixty by one hundred and twenty feet, will make it one with the power house and boiler plant. It is being equipped in the most modern manner for the testing and completion of electrical machinery and apparatus.

A thirty-ton traveling crane is being installed in this building.

In the boiler room a 200 horse-power, 150 lbs pressure Babcock & Wilcox boiler is being placed and it is expected that the boilers now in use will be superseded in the near future by larger ones. Forced draught is now being used for the boiler, but this is being done away with and a chimney over 100 feet in height is being built. The power house will have added to it a 300 horse power Goldie & McCullough Ideal high speed engine, direct connected to a 200 kilowatt 250 volt direct current Bullock generator. Special device is attached to this generator, which is entirely new on electrical machinery, by which the brush yoke is moved about a quarter of an inch one way or the other every seven and a half minutes, thus the commutator surface is being used over its total length. A 50 kilowatt generator, direct connected to a 75 horse-power engine is being kept for night work and special tests. Two new heaters are being installed by the Buffalo Forge Co., one of which will heat the machine and electric shops and the other the blacksmith and pattern shop. Instead of sending live steam to the different buildings for running steam engines, electricity is to be transmitted and individual and group motor driving to be adopted. A recent installation in the works was the placing of a 12 foot boring mill, manufactured by the Niles Tool Works, which is being run by a 40 horse-power motor direct connected, in connection with which the Bullock multiple voltage system is used and found to give every satisfaction. This system will be used on future installations of motor driven machine tools.

Machinery News.

A carload of machinery for the Northwest Gas and Oil Company arrived last week in Edmonton, N.W.T. The shipment made good time, as it left Pittsburgh on September 2. It included engine, boiler, drills, pumps and everything except the casing, for a first-class boring outfit.

The Hoepfner Refining Company was to have sold out the Nickel Copper Company for \$48,000 rent due for the past four years, but the sale was postponed for two weeks, and it will be held on October 14. It is not often a bailiff seizes property for such an enormous amount of rent, but Bailiff Greenfield had the duty of making the seizure. The warrant was signed by Vice-President James Dixon and Secretary John Patterson.—Hamilton Herald.

The stock in trade of the Maritime Auer Light Co., Limited, is offered for sale before October 7 by W. H. Thorne, St. John.

The Massey-Harris Co., have bought outright the Kemp Manure Spreader Co., Stratford, Ont., and will continue to operate the works there.

An announcement was made in the daily papers last week that the United States Steel Trust had bought the Cramp Steel Works at Collingwood, Ont. This was premature as the negotiations have not yet resulted in a sale.

Cornelius Shields, of the Consolidated Lake Superior Co., Sault Ste. Marie, Ont., states that the first order for 10,000 tons of steel rails lasted that company one month. Other orders are now on hand.

The director of the U. S. mint reports that there was produced in the United States in 1903 54,300,000 fine ounces of silver, valued at 54 cents per fine ounce. The gold produced was valued at \$73,591,700. The total output of gold shows a decline of \$6,400,000, and of silver a decline of 1,200,000 ounces from the figures of the previous year.

Hon. C. D. Haines, of New York State, proposes the construction of an electric railway from Hamilton to Brantford.

Machinery and Electrical Notes.

The Jones & Moore Electric Co., Toronto, are installing the complete electric lighting plant for the Collingwood Furniture Co., Collingwood.

THIS is the title of a paper read recently before the Institute of Heating and Ventilating Engineers by Walter Yates, which contains some very interesting information on the subject.

It is unnecessary for practical purposes to estimate to a nicety the weight of air necessary for the combustion of fuel, for the variableness in the combustion renders all ordinary calculations approximate only. It is, therefore, the common practice to estimate the amount chemically required for coal at 12 lbs. or say 150 cub. ft. per lb. of fuel. It is found, however, in practice, that the chemical requirement is very much below that actually needed for complete combustion, due to causes which it is unnecessary to enter into here, and it is customary to provide for double this quantity, or 24 lbs. of air per lb. of fuel, where natural draught is to be used with hand-firing. With mechanical draught, however, this excess of air over the chemical requirement is much reduced, becoming about 18 lbs. of air per lb. of coal. Natural draught is that produced by a chimney. The only openings to a chimney should be at either end of it. Leakage of air through a chimney or boiler setting has a very serious influence on the draught, and is often accountable for a very greatly decreased efficiency; not only is this the case with faulty brickwork, but it takes place where the mortar joints are apparently sound. The effect is, of course, to increase the volume of air to be handled and decrease the temperature, resulting in a reduction of the draught in the chimney. Draught is caused by the superior weight of a column of cold air over the weight of a similar column of equal height of the hot air enclosed in the chimney. A chimney with natural draught will have a draught dependent upon its height, the power of which will not vary, except upon the rise or fall of the internal temperature. It has, therefore, no sucking power; in fact, the term suction in this connection is a fallacy. The chimney acts because the external air is heavier than the internal, and thus presses into the chimney by the only available opening—viz., that at the bottom, the furnace front. The pressure or intensity of the draught fixes the amount of fuel it is possible to burn on a given area of grate. It therefore becomes necessary, when it is desired to increase the steaming capacity of a boiler by increasing its coal consumption, to increase the intensity of the draught; and the only way in chimney draught is to increase the temperature of the gases passing up it, or increase the height of the chimney. The first method, of course, means a large amount of waste, and is a very uneconomical arrangement; the second is expensive and unusual. A chimney stack 150 ft. high will burn from 15 lbs. to 20 lbs. of coal per square foot of grate area per hour under normal conditions, but in wet or foggy weather it will be very much less than this, as the wet air is lighter than the dry, and thus produces less pressure at the furnace (the weight of water vapor is about half that of air). A fair average of temperature in the furnace is 2,400 degs. Fahr., and that of the escaping gases at the chimney, without economisers, 600 degs. Fahr. This means that one-quarter of the total heat generated is sent up the chimney to waste. Thus, on a 2,000 h. p. plant, almost 500 h. p. is going up the chimney per hour, and the coal bill necessary to sustain this will come to a big figure in the year. Suppose we could reduce the amount of air accompanying each pound of coal from, say, 24 lbs. to 12 lbs. (the chemical requirement), and the temperature kept the same, then we would only send $\frac{1}{2}$ of the total power up the chimney and save $\frac{1}{2}$ of the coal bill at the same time. The temperature in the furnace would then be greater, the heat generated greater, and, of course, the temperature of the gases at chimney less. The effect of the draught and the air supply to boilers having been demonstrated to be of such importance, we are brought now to the consideration of the best means of producing the requisite draught, and it is not only the author's contention, but has become a well ascertained fact, that it is cheaper and better in every way to provide the necessary supply of air for burning fuel in steam boilers by mechanical means, and to take as much heat out of the hot gases after they have ceased to be in contact with the boiler itself before they are turned out into the atmosphere, than to do it in the older way by utilizing a portion of the heat generated to create the necessary supply of air. This is the primary reason for using a mechanical means of moving the air. The heat previously necessary to create the draught by means of a chimney may now be employed usefully in other directions. There are several forms of mechanical draught, and perhaps the first step in that direction is the use of steam jets. But it is with fan-draught that this paper is intended more particularly to deal. Fan-draught may be divided into two distinct classes—viz., forced and induced. Forced draught may, again, be subdivided into two methods—viz., first, closed stoke-hold, and second, closed ash-pit. The first, or closed stoke-hold method, is almost exclusively used for ship work. For land work or stationary boilers, however, this method can scarcely ever be adopted; and if a forced

draught system is desired, the closed ash-pit must be resorted to. As in the stoke-hold method a minimum fan-power is required, as cold air is being handled, but there are several disadvantages which, in the author's opinion, far outweigh any saving which might be effected by using the smaller fan, as for instance, (1) Initial cost of furnace fronts is very high, say \$78 per furnace, and these are frequently needing repair. (2) Fires do not burn so evenly. (3) The air supply must be shut off before the fire-door is opened, or the stoker would run grave risk of being burned through the pressure forcing the heat and flames outwards. (Automatic appliances have been tried, but are not always a success.) (4) The pipes conveying the air to the furnaces are very much in the way, and are usually very unsightly. In the author's opinion by far the best method of obtaining draught by mechanical means is the induced draught system, wherein the fan is placed between the boilers and chimney, or point of discharge of waste products into atmosphere. By such an arrangement the coal consumption may be increased from the 15 to 20 lbs. per sq. ft. of grate per chimney draught to 30 to 40 lbs. per ft. under ordinary conditions, and beyond this amount under special circumstances. This results not only in a proportionate increase of steaming capacity in the boilers, but in greater efficiency of combustion and consequent economy. Most steam boiler plants nowadays are provided with economisers. Where such is the case an opening is made in the flue between the economisers and chimney, and the fan inlet connected thereto by a short brick or metal flue. Another opening is made in the main flue at a point nearer the chimney, or into the chimney itself, and this opening is connected to the fan outlet in the same way as to the inlet. Between the openings, and inside the main flue is placed a damper, so that all gases after leaving the boiler must of necessity pass through the fan on their way to the chimney, so long as the aforementioned damper is closed. It is also customary to place dampers both at the inlet and outlet of the fan, so that by manipulating these two and the one in the main flue, the fan may be cut out, and natural draught resorted to in case of necessity. The same arrangement applies where no economisers are installed, and in such cases the fan handles the gases at the high temperature at which they leave the boilers. Of course in either case special arrangements must be made in order to keep the bearings cool, either by water-jacketed bearings or an arrangement of air cooling. In this instance the fan inlet is placed close against the main flue, and again the outlet or delivery is through a connection into the chimney.

It will be noticed that the fan shaft goes right through the flue to a bearing on the opposite side. This was necessary as the fan was a large one, and an overhung wheel was not desirable. This plant showed a saving of 25 per cent. of the year's coal bill, through being enabled to burn an inferior quality of coal. This saving more than paid for the induced-draught plant in the first year's run. The author describes several methods of installing fans, and proceeds to remark that the very satisfactory results secured by a system of induced draught are due to a less volume of air being required though at a higher pressure than with chimney draught. A chimney usually works at a vacuum of $\frac{1}{2}$ in. to $\frac{3}{4}$ in., while an induced fan is generally arranged to give $1\frac{1}{2}$ in. to 2 in. In consequence of this thicker fires can be carried, and higher temperatures maintained, resulting in more rapid conduction of heat through the heating surface, and therefore a greater economy of heat than with chimney draught. This high temperature of combustion, and consequent increase of evaporating power of the boilers, is such that three boilers with induced draught will do the work of four with chimney or natural draught. Occasionally better results even than these have been secured. One advantage of induced over forced draught is that a better and more even distribution of air is obtained. One of the best arguments in favor of induced draught is that by it the pressure may be kept practically constant, and consequently the temperature, so that the boiler shell and furnaces do not contract and expand to the same extent, thus saving large sums of money in repair bills for leaky joints and rivets. It is not always possible to keep boilers idle when an induced draught system is introduced to an existing plant, as where one or two boilers may be installed. In such a case an alternative is to reduce the length of the fire-bars, and by keeping thicker fires to secure the beneficial results already described. One of the most valuable features of an induced-draught apparatus is that it enables the high temperature upon which a chimney depends for its results to be dispensed with. In fact, the more heat abstracted from the gases by economisers and such like apparatus for heating water, air, etc., the better it is for the fan. A very important point not yet touched upon, and particularly applicable to buildings projected, is the question of the chimney in relation to induced draught. A stack higher than that necessary to carry the gases above the surrounding property, say about 50 ft. high, is useless where an induced-draught fan is at work. It therefore pays to consider the question of fan versus chimney in the matter of first cost, and also as to economy of space.

CONDENSED MACHINERY ADVERTISEMENTS.

CONDENSED MACHINERY ADS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
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MACHINERY WANTED.

Items under this heading inserted free for readers of
HARDWARE AND METAL

A SECOND-HAND power machine in good condition, for cutting iron bars up to $1\frac{1}{2}$ inch round; state make of machine; weight, time in use, best price. Box 509, HARDWARE AND METAL, Toronto.

ENGINE WANTED—Second-hand; high speed; short stroke; 30 to 40 h.p.; must be complete; good condition; a bargain. Apply Box 395, HARDWARE AND METAL, Toronto.

GASOLINE ENGINE WANTED—Six horsepower, complete; cash price. S. S. Morris, Rodney, Ont.

SMOKESTACK WANTED—40 or 50 feet of 24-inch stack; new or second-hand; in first-class condition; also small lath machine. Box 80, Providence Bay, Ont.

SCALES—Heavy; double iron column dormant scales; double beam; for grain warehouse. Box 36, Hensall, Ont.

WANTED—Second-hand duplex pump; about 10 x 6 x 12; state particulars by letter. John E. Russell, 908 Queen street east, Toronto.

WANTED—Second-hand Gasoline Engine. 15 h.p., with $3\frac{1}{2}$ in. pulley. Must be in good repair and cheap. James Leach, Eden, Ont.

WANTED—10 h.p. Motor of 110 volts. State how long in use and lowest price. Address P.O. Box 378, Winnipeg.

WANTED—To purchase at once for cash, small second-hand Gasoline Engine, 4 h.p., full outfit. Apply R. Gillespie, Norwood, Ont.

WANTED—Good second hand pair tinner's squaring shears, either 24 or 30 in. cut, state make, how long used, condition and price. Bennett & Son, Gananoque.

WANTED—Second-hand Plate Chopper. Pulleys and Shafting to connect. Lock Box 22, Burford.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, HARDWARE AND METAL, Montreal.

ENGINE FOR SALE—20 h.p.; stationary, side crank. Price \$80. Address Box 41, HARDWARE AND METAL, Montreal.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal

MACHINERY FOR SALE.

SECOND-HAND saw-mill machinery for sale. Buyers are requested to write regarding the below to W. H. COWELL, HARDWARE AND METAL, 10 Front St. East, Toronto.

1 Watrous Side Crank Engine, cylinders 12 x 14 in.; $4\frac{1}{4}$ in. shaft.

1 Fly Wheel Pulley, 18-in. face, 6-in. dia.; **1** Driving Pulley, 12-in. face, 36-in. dia.; **1** Driving Pulley, 8-in. face, 26-in. dia., bore $5\frac{1}{2}$ in.; bore bushed to $4\frac{1}{4}$ attached, out-board bearing.

1 Return Tubular Boiler, 52-in. dia., 14 ft. long, 52 $8\frac{1}{2}$ -in. tubes.

1 Shaft, 2-in. dia., 9 ft. long; **1** pulley, $5\frac{1}{2}$ -in. face, 6-in. dia., wood; **1** pulley $6\frac{1}{2}$ -in. face, 10 $\frac{3}{4}$ -in. dia., iron attached, 2 bearings.

1 Shaft, 2-in. dia., 37 in. long; **1** Pulley, $5\frac{1}{2}$ x 24 in.; **1** Pulley, $6\frac{1}{2}$ x 10 $\frac{1}{2}$ in., attached, two bearings.

1 Shaft, $2\frac{1}{2}$ in. x 15 ft. 10 in.; **1** Cone Friction Pulley, wood, 10 in. thick, 13 $\frac{1}{2}$ in. small dia., 32 in. large dia.; **1** Pulley, 11 x 30 in., wood; **1** Pulley, 4 x 10 in., wood; **1** Pulley, 7 x 48 in., iron attached, 3 bearings.

1 Shaft, $2\frac{1}{2}$ in. x 7 ft. 11 in.; **1** Cone Friction Pulley, iron, $7\frac{1}{2}$ in. thick, 14 in. small dia., 28 $\frac{1}{2}$ in. large dia.; **1** Pulley, 10 x 24 in., iron attached, 2 bearings; **1** Eccentric, for throwing frictions in and out of gear.

1 Shaft, $1\frac{1}{2}$ in. x 9 ft.; **1** Friction Pulley, 8 x 10 in., winding wood drum, 6 in. x 4 ft. 6 in., 4 in. flanges, attached, 2 bearings.

1 Shaft, $1\frac{1}{2}$ in. x 5 ft.; **1** wood pulley, 10 x 76 in., 2 bearings attached.

1 Belt Tightener Pulley, 16 x 20 in., in swinging frame, $1\frac{3}{4}$ -in. shaft, 2 bearings.

1 Shaft, $2\frac{1}{2}$ in. x 9 ft.; **1** drum, 10 in. x 3 ft. 7 in., 12 $\frac{1}{2}$ in. flanges; **1** pulley, 7 in. x 45 in., wood, 2 bearings attached.

1 Rogers Pat. Emery Wheel, saw sharpening machine, manufactured by Hart Emery Wheel Company, Hamilton, Ont., takes 84-in. saw; counter shaft and pulleys for same.

1 Piece of Shafting, $4\frac{3}{4}$ in. x 10 ft. 2 in.

1 14-in. Edging Saw.

1 49-in. Circular Saw.

1 52-in. " "

1 60-in. " " inset teeth.

1 28-in. Slab Saw on arbor and frame.

9 Slab Rollers, iron, 20 x 10 in. dia. in bearings, 2-in. shafts.

1 Edging Table, 15 ft. long x 17 $\frac{1}{2}$ in. wide, on iron wheels, and bed with iron rails, 32 ft. long.

1 $\frac{3}{4}$ -in. Saw Arbor, in frame, also friction pulleys, levers and gear for operating log carriage, complete.

1 Log Carriage Rack, driven on iron rails, complete.

1 Pulley, 6 x 18 in., 2-in. bore.

1 Paper Pulley, 6-in. face, 11 $\frac{1}{2}$ in. dia., 13 in. dia. over flanges, 2-in. bore.

46 ft. of new Main Belting Co.'s Leviathan Belt, 14 in. wide, $\frac{1}{2}$ in. thick.

Also a lot of second-hand belting, some of which is in fair condition. The machinery is in good condition. There is no smoke stack. Boiler front and grates in good condition; boiler in brick setting. Write regarding above to W. H. COWELL, HARDWARE AND METAL, Toronto.

IF you want to Buy Machinery of any kind We will insert an Announcement Free.

IF you want to Sell Machinery of any kind We can introduce you to hundreds of buyers.

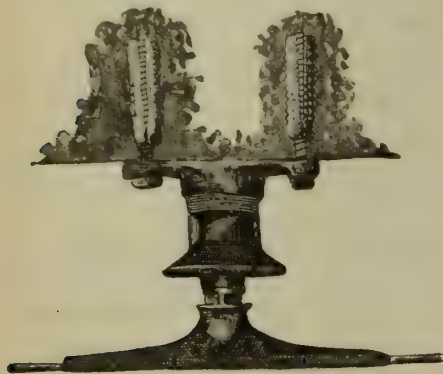
Write for full particulars to

Information Bureau

Hardware and Metal and Canadian Machinist
MONTREAL TORONTO WINNIPEG

The Diamond Expansion Shield.

THE Diamond Expansion Shield shown herewith will be of interest to telephone and telegraph companies, electric light and power companies, miners, railroad companies and others having occasion to fasten trolley and feed wires to brick or stone buildings, the roof or wall of mines or tunnels, and also for attaching electric wires to brick, stone, concrete, or other masonry. If desired, a pin with standard insulator threads can be cast on the bolt, making it unnecessary to use



wooden pins, or the bolt can be made for inserting into the wooden pin. This shield can be used to advantage in place of wooden plugs, sulphur, lead, wedge bolts, etc., which frequently give poor results.

The shields are made of metal, threaded on the inside to receive the screw, thicker at the outer end to expand as the screw is run in and a roughened outer surface to grip the sides of the hole. When properly set they will not work loose and cannot be pulled out except by actually breaking



the material from around them, but at the same time may be removed by simply unscrewing the bolt.

The operation of the Diamond Expansion Shield is very simple. A hole is drilled, the shield inserted and the screw run in. The shield insures a positive hold in any solid material and the greater the strain on the bolt the more the shields grip the sides of the hole. The shields are made in sizes from $\frac{1}{8}$ in. to 2 in. diameter screw, and are manufactured by the New Jersey Foundry & Machine Co., of 9 Murray street, New York.

School for Machine Fitters in Russia.

ACCORDING to a report of the German consul at Kief there appeared a short time ago in the *Stefnoi Krai*, published in Omsk, a communication to the effect that the American firm of D. M. Osborne & Co., which sells annually more than \$510,000 worth of agricultural implements at that place, has decided to erect a technical school in which persons will be trained to use agricultural implements and to instruct farmers in their use. The company found that the lack of knowledge of agricultural machines was the greatest drawback to the development of its trade in that region.

This idea is also applicable to other parts of Russia. The governments of Ekaterinoslaf and the region of the Don should erect such a school. The agricultural implements purchased there are for the most part of Russian manufacture and are no cheaper and no better than foreign-made machines. The foreign machines are discriminated against solely because the Russians are not familiar with them. In the other governments there is not this need.

Agricultural and mechanical students in the Polytechnical Institute at Kief and the Technological Institute in Kharkof are taught the manufacture and use of agricultural machines, and the Provinces of Kief, Volhynia, Kharkof, and Poltava also have a number of agricultural schools in which pupils are given instruction regarding the use and mounting of agricultural machines. The agricultural interests of Russia are especially desirous of giving instruction along these lines.

In the consular district of Kief agriculturists are seldom embarrassed by lack of technical knowledge, which is to be gotten when needed from near-by sugar factories.

Power, Economical and Otherwise.

A COMPARISON is made in the *Electrical Engineer*, London, between the operation of an old reciprocating steam engine, with a normal rating of 35 horse-power and which actually developed anything up to 60 horse-power and a gas engine which replaced it. About 45 horse-power was required to drive the mill. For this purpose the engine, which was an old one, consumed 25 hundredweight of good Scotch coal. When it became necessary to replace the old plant, four methods were possible, a new steam engine and boiler, a source of water power three

miles distant, an oil engine, and a gas engine. The choice fell upon a gas engine to be supplied with gas from a producer. The plant as installed, is comparatively simple, consisting of a generator, burning anthracite coal or coke, a water jacket for cooling the gases, two scrubbers, and an expansion box, near the engine. Comparing the old system with the new, it is seen that the engine required twenty-nine by eleven feet and the boiler a space of twenty-five by nine feet, making a total of 558 square feet. The gas engine required a space of only eighteen feet by thirteen feet and the producer a space of fifteen by ten feet, making a total of only 384 square feet. The fuel consumption of the gas engine never exceeds five hundredweight per day. The power for this system costs 32 cents per horsepower hour, while with the engine it was 1.13 cents per horse-power hour. There are, however, some objections to the gas engine. Unless it is watched carefully it gives trouble, but if kept clean and the scrubbers are cleaned out regularly, very little attention is necessary. With this plant it is found necessary to clean the exhaust valve in the engine twice a week, and to clean both gas and air valves once in two weeks. The electric ignition system must be cleaned twice a week. If this work is done regularly it does not take much time and the plan operates very free from trouble. It is estimated that the depreciation would be about 10 per cent., as the keep-up of the gas engine is slightly higher than that of a steam engine. This is offset somewhat by the lower depreciation of the producer plant as compared with a steam boiler. As a source of power, produced gas is highly to be recommended where an occasional stoppage of the day's work is not of vital importance, but in all other cases it has hardly allowed a sufficient pitch of reliability to warrant its introduction.

Which is Engine of Future?

Machinery Editor Hardware and Metal:

Dear Sir,—I had a discussion lately regarding the future of power development. A friend of mine maintains that in a few years the steam engine would be obsolete, giving way to steam turbines, gas engines and electric power. I held that the steam engine has a place to fill, and that it is going to stay. I would like to hear some opinions regarding same in your machinery columns. Yours truly,

S. M. C.

Peterboro, Oct. 3rd, 1904.

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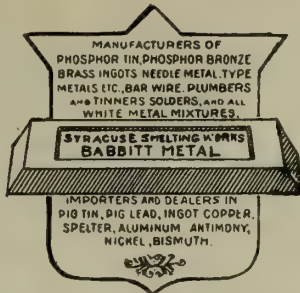
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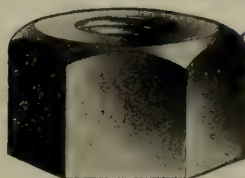
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ELECTRICITY AND LIGHT.

THIS subject has been discussed times without number, and any full comparison of electricity with other sources of artificial light generally ends favorably to the former. Although its introduction has almost revolutionized the art of lighting considerable advance is still expected. The lines along which the greatest progress is expected are dealt with in an article in Cassier's Magazine, part of which is given.

In producing light by incandescence the highest possible temperature gives the best efficiency. Here, however, we soon strike an absolute barrier. Any material will ultimately melt or evaporate. Carbon probably is the most refractory substance, and the boiling point of carbon is the highest temperature to which a solid can be raised. At this temperature the visible rays probably still amount to less than 10 per cent. of the total rays, making the efficiency of light production still less than 10 per cent. even if the enormous loss of heat by conduction and convection could be avoided. In a carbon arc lamp the crater of the positive carbon is at the boiling point and gives the most efficient incandescent light, making the carbon arc lamp the most efficient illuminant. In the incandescent lamp a much lower temperature is necessary to avoid too rapid self-destruction, and so a lower efficiency results. In producing light by combustion no temperatures like these can be realized, since far below the temperature of the arc chemical affinity has disappeared and combustion ceased. This accounts for the still much lower efficiency of light production by combustion.

Only solids and liquids follow the temperature law of radiation, by which the ratio of visible to total radiation is a function of the temperature, increasing with the increase of temperature. In any substance in which the molecules can move independently of each other, as in gases, especially at reduced pressure, the vibrations of the molecules, like those of a tuning-fork, are of a definite period or wave length, or usually a number of wave lengths. Sodium vapour, when luminous, gives out radiations only of the wave length .00059 millimetre; mercury vapour gives radiations of a few definite wave lengths only. Here, then, the temperature law does not apply, but the ratio of the visible to the total radiation depends on the chemical and physical characteristics of the gas and may be very high. A large percentage of the wave lengths given by the luminous gas molecules may be within the octave of visible light, as with mercury or titanium.

With other substances, as with carbon and silicon vapours, most of the waves may be outside of the visible range, and such vapour molecules would give a nonluminous radiation, or practically such.

Unfortunately, when supplying heat to a gas we do not get vibration, as with a solid or liquid body, but rectilinear motion of the molecules, which appears as mechanical pressure and not as radiating energy. Heating a gas expands it, but does not make it luminous to any extent. Vibration of the gas molecules to produce light can, however, be brought about by other means, such as chemical reactions and electrical excitation.

Gases and vapours are made luminous by electrical excitation, either by the electrostatic spark, as in the Geissler tube, or by the electric arc. A spark is made by the passage of an electric current over a gap between conducting terminals through the gas or vapour filling the space. To produce a spark the voltage or electric pressure has to be raised until it breaks down the gap between the terminals. This usually requires a very high voltage, but only a small current. The electric arc is made by the passage of a current across a gap through a conducting vapour bridge formed by the material of the terminals, at relatively low voltage but high current. The arc does not start itself, the vapour bridge having first to be formed, either by jumping a spark across the gap or by bringing the two terminals into contact with each other and then separating them. A bridge of vapour, at the temperature of the boiling point of the material of the terminals, is thereby left behind, which is constantly replenished by evaporation from the terminals. Such an arc may be formed either at atmospheric pressure or in a vacuum. The carbon arc is the hottest of electric arcs, while mercury has such a low boiling point that the mercury arc can be, and is, enclosed by a gas tube.

Experiments are also being made on the production of luminosity in gases by the electrostatic spark in a partial vacuum, as in the Geissler tube, but the great difficulty seems to be in the high voltage required and the low intrinsic brilliancy of the Geissler tube glow, which requires the use of enormous surfaces to produce sufficient illumination.

Metal salts introduced in a non-luminous gas flame make it luminous by giving their characteristic metal spectra, as: sodium salts, yellow; lithium, red. Here the luminosity of the metal vapours is probably due to chemi-

cal reaction. A much greater brilliancy than that obtained by the use of a gas flame can be secured by introducing such metal salts into a carbon arc, the latter being very much hotter than the former. The best way is to incorporate these metal compounds into the positive carbon terminal, that being the hotter, and, therefore, giving more rapid evaporation. Arc lamp carbons impregnated with metal salts, so-called flame carbons or effect carbons, are now on the market. They give, in addition to the light of the incandescent carbon crater, an additional light from the arc flame, and so an efficiency much higher than the ordinary carbon arc. Their main drawback, however, is that they must be operated as open arcs; they cannot be protected from rapid combustion by an air-tight enclosing globe, since the metal salts produce a smoke or dust which has to be carried off. Such flame carbon arcs, while far more efficient than the ordinary enclosed arc of to-day, are what is called "short-burning": the carbons have to be replaced or the lamp trimmed every day, while the enclosed lamp needs attention once a week or less frequently. To-day the short-burning or open carbon arc has almost entirely been replaced by the long-burning or enclosed arc. Whether the high efficiency of the flame carbon arc will be sufficient to compensate for the short life of the carbons and so reintroduce the open arc, remains to be seen.

The number of substances which can be used to give luminosity to carbon arcs is rather limited, and thus far the only materials which give a great increase of light are calcium compounds, mainly calcium fluoride (fluor-spar). They are almost always used in flame carbons, producing a reddish-yellow light which shows color values very different from daylight. In these flame carbon arcs the current is carried by carbon vapour, as in the ordinary arc, and the light is given by the metal salt, probably indirectly by the heat of the carbon vapour causing chemical reactions.

A direct method of producing luminosity in vapours is found by using them instead of carbon as carriers of the current in the arc, replacing the carbon altogether by some other conducting substance which gives a luminous flame. Typical representatives of such luminous arcs, which probably approach nearer than anything before to the direct conversion of electric energy into light, are the mercury arc and the magnetite arc, both of which are now appearing before the public. They seem to be the first step in a radical advance of the art of electric illumination.

In the mercury arc the current is carried by mercury vapours. At least one

of the terminals must consist of mercury, and to avoid the escape of mercury vapours into the air the arc is enclosed in a glass tube from which the air is thoroughly exhausted, so that the arc completely fills the tube. In consequence, the mercury arc is absolutely steady and no consumption of material takes place, and its life, which may reach thousands of hours, is limited only by accidental destruction of the glass tube. The light of the mercury arc is of a greenish-white hue, deficient in red rays, so that colors are not represented in their correct daylight values. This feature for certain purposes limits the use of the mercury arc, but the absence of red rays eliminates the harmful effect of ordinary artificial illumination which is almost exclusively due to the red rays preponderating in the light of the ordinary illuminants.

Where work is to be done for considerable periods with artificial illumination; and for street or park lighting the mercury arc appears especially suited. Its efficiency is extremely high. The mercury arc gives from three to four times as much light as a carbon arc, consuming the same power and about six times as much as the incandescent lamp.

German vs. American Tool Machinery

(From United States Consul Langer, Solingen, Germany.)

TOOL MACHINERY prices have not recovered from the pressure of surplus offers, so that factories have been run, not only without profit, but in many instances at a loss, although they have been somewhat busier of late. Prices have not gone up because large stocks of machines are still on hand, and American competition is keenly felt, owing to the fact that, as is claimed, the United States is placing its surplus output of tool machines upon foreign markets.

The Russian-Japanese war does not appear to have affected the manufacture of tool machinery, except that it has brought some orders for war purposes from Japan.

While the matter of forming a combination is still being discussed among tool machine manufacturers for a better unity of action, no definite steps have been taken.

The trade balance for tool machinery decreased nearly 1,100 tons in 1903, of which 600 tons were due to the increased export and the other 500 to the increased import of American tool machines.

For the first quarter of 1904 the import increased from 576 tons to 1,070 tons; that is, to a considerably greater extent than the exports, which increased from 1,000 tons to 6,279 tons. This is about six

times the amount of the imports, while last year the exports were nine times as much as the imports.

The imports from the United States have more than doubled during the first three months of 1904 being 578 tons, against 269 tons in 1903; appearances tend towards a still higher increase. This seems to be the chief reason for the continued agitation of German tool machine factories for higher rates of duty.

Sand Required for Iron and Sand Castings.

The consumption of sand per ton of 2,000 lbs. in the production of iron and brass castings is given in the Foundry as follows: "Iron castings average of 6.7 tons of castings, equals .191 tons of sand per ton of castings. Brass castings average of .117 tons of castings made, equals .56 tons of sand per ton of casting."

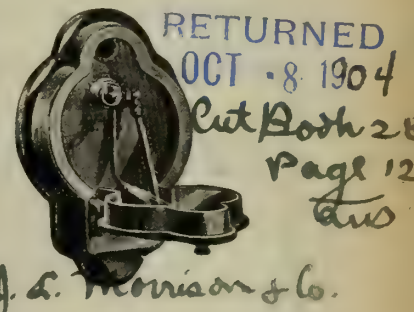
A Profit-Sharing System.

The forty or more employes of H. W. Petrie, the well-known Toronto machinery man, have been treated to a very pleasant surprise. A year ago Mr. Petrie decided to put into force a profit-sharing plan, whereby each of his employes would derive some benefit from the profits they helped to earn from day to day. The first distribution was made last month, and needless to say the plan has been successful, even far beyond all expectations. The bonus for each man was based on his salary, that is, his salary is assumed as so much capital in the business, and each and every one, from the manager to the office boy received his share. The employes one and all were much pleased with the result, and

the plan has been so satisfactory to Mr. Petrie that he has decided to continue it.

A NEW AND NOVEL PLUMBING DEVICE.

ALWAYS in advance of the times, the James Morrison Brass Mfg. Co., Limited, of Toronto, Ont., dealers in plumbing supplies and bathroom equipment, are now introducing to the trade a highly novel and sensible device which is nothing less than a folding



urinal. As its name indicates, this device is capable of being made very compact and does away with the unsightliness of the old style urinals.

Cast aluminum is used for the manufacture of this urinal, while all of the connections and flushing attachments are heavily nicked so that the completed device is of wonderful strength and durability. Wherever this new equipment has been used it has been found to be a splendid improvement, and a lively demand has already sprung up for the equipment.

The James Morrison Brass Mfg. Co., Limited, are making a very special proposition on this specialty to dealers throughout the Dominion, and will be pleased to furnish information concerning the device to anyone sufficiently interested to write them.



Complete Electric Bell Outfits

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We give full instructions for installation.



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Oak, Ash, Walnut, Cherry - 7c. each
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National Bank, The Fourth National
Bank; **Boston** The Bank of Nova
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The National Suffolk Bank; **Buffalo**,
The Marine National Bank; **Chi-
cago**, The Northern Trust Company;
Detroit, The People's Savings Bank;
The Commercial National Bank;
Minneapolis, The North-Western
National Bank; **New Orleans**,
The Commercial National Bank.

FRANCE—

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Freres & Cie, Paris.

GERMANY—

Deutsche Bank.

HOLLAND—

Disconto Maatschappij, Rotterdam.

BELGIUM—

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ited; Bank of Africa, Limited.

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lulu; Bishop & Co., Honolulu.

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gentina, Limited.

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maica; Colonial Bank and Branches;
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RESERVE FUND, - - - 1,000,000.

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CREDIT INSURANCE.

INSURANCE against loss by fire and insurance against the risk of death are familiar phenomena in modern business. There is, however, a new phase of the insurance question, just beginning to occupy the attention of the public. This is no less than the protection of merchants against the loss which occurs through the granting of credit. The basic principle of this credit insurance is that the accounts entered upon the books of a business firm or corporation are as essentially "property" as the buildings or stock of that business, and for the same reason ought to be insurable. As the buildings or stock may be damaged or destroyed, so may these debts depreciate or altogether disappear, through the misfortune, incompetence, fraud or death of the debtor. Insurance of credits, although not yet transacted on so extensive a scale as other forms of insurance, has nevertheless long passed the experimental stage, and abundantly proven its safe and profitable character when judiciously conducted.

It must not be understood that credit insurance, as practised, covers the whole loss of a firm or corporation. It does not cover all bad debts, but simply the loss by bad debts, which is in excess of the ascertained normal loss. In the case of a merchant, whose total sales amount to \$500,000 a year, assume his average of loss by bad debts to have been one-half of one per cent., for six years past, that is \$2,500 per annum. This constitutes his normal or "own" loss and is not covered by his credit insurance. If his total loss for the year insured does not exceed \$2,500 he has no claim under his policy. But if his losses amount to \$4,000, he, himself bears the first \$2,500 and the company bears the balance or \$1,500.

The similarity in principle between credit indemnity and fire insurance is manifest. Both are the provision made by prudent men against the unexpected. Credit insurance, properly understood, is no incitement to undue extension of sales, but a safeguard against abnormal loss through causes which cannot possibly be foreseen. It in effect gives an absolutely responsible endorser and strengthens the position of the insurer with his banker, who is assured that disaster cannot befall him through loss by bad debts.

A company, known as the Canadian Credit Indemnity Co., Limited, has just been formed, to undertake the insurance of credits in Canada. Its board of directors includes such men as John W. Langmuir, John F. Ellis, Peleg Howland and W. K. McNaught, of Toronto. The authorized capital of the company is one million dollars in 10,000 shares of \$100 each.

FIRM INSURANCE.

A FEATURE of life insurance that is being rapidly developed in Canada is the department of firm insurance in which one or all the members of a firm carry insurance on their lives for the benefit of the firm. Firm insurance is done in two ways. The older method is the

writing of what are known as "joint life" policies. The firm in this case carries one life policy, and in the case of the death of one of the partners the insurance money is paid into the firm, and thus there is compensation to the surviving partners for the loss of their colleague. The disadvantage that this form of firm insurance labors under is the fact that in case of dissolution of partnership there is no way of satisfactorily arranging the policy. The only thing that can be done is to surrender the policy, and this means a considerable loss of cash to the policyholders.

As a result of this disadvantage the joint life system is being replaced by another system, under which each partner carries an individual policy, the firm in each policy being named as the beneficiary. Then, if there is a dissolution of partnership, the different policies can be adjusted in any way the holders desire, and anyone else's name may be substituted as beneficiary for that of the firm.

The joint life system is still in use in cases where there is practically no danger of dissolution of partnership, as, for instance, when the members of one family are the partners.

Often this variety of insurance takes the form of a single policy on the life of but one man connected with a business. This is generally the active manager. In the case of a company, with a number of silent partners or shareholders, it would obviously be a heavy loss to them to lose a successful manager. They accordingly insure his life. A case was recorded recently of the advertising man of a company being the one on whom a large policy was placed. The success of the business was considered to be due to him and the company decided to put \$50,000 on his life.

NOTES.

The Metropolitan Bank's head office is now located in the Canada Life Building, Toronto.

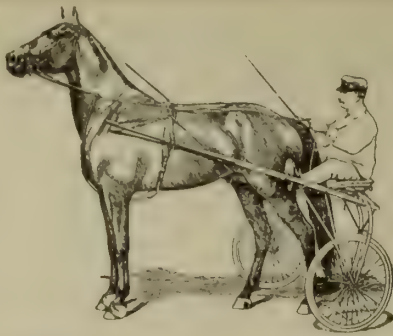
Mr. James Boomer, Toronto manager of the Manchester Assurance Co., died on September 13.

The German-American Insurance Company of New York is said to be about to enter Canada.

The Montreal office of the Imperial Bank of Canada has been transferred to the reconstructed building at the corner of St. James and McGill streets.

Mr. William MacKay has been appointed Canadian manager of the Royal Insurance Company, succeeding the late Mr. George Simpson. Mr. J. H. Labelle has become assistant manager and Mr. George Jacoby general superintendent.

The Trusts and Loan Company of Canada, Limited, have sold out their various mortgage interests in Ontario to the Toronto Mortgage Co., Limited, and will in future confine their attention to the Province of Quebec and Western Canada.



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Burns Coal, Coke or Wood.

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HOW TO MEASURE CLOTH AND WIRE.

MANY of the trade were interested in an article published in the September 17 issue of Hardware and Metal on "How to Measure Wire Cloth and Wire." In publishing this article we inadvertently neglected to credit the Greening Wire Co., Limited, of Hamilton, with this excellent information, which credit it is now a pleasure to acknowledge.

WON FIRST PRIZE WITH SILVERWARE.

EVERY season finds the hardware trade taking a greater interest in silverware as a line which adds to the profits of the business and to the attractiveness of the retail store.

As an illustration of the possibilities of silverware a letter just to hand from J. D. Mills, Prescott, Ont., is worthy of note. Mr. Mills writes: "I might say that this line (silverware) is the best paying in this store, and has been

ever since it was taken up, and now that it is being pushed it is still better. In fact the directors of the Prescott Fair awarded us first prize for the best exhibit at their annual exhibition here, and our display was all silverware."

This experience is quite in accord with many that have been published in this paper. The more attention paid to this line the more profitable it becomes. This is not true of staple lines in nearly as great degree as of a line of specialties like silverware as the limit to the demand for the staples is much better defined than is the case with the specialties.

DUMPING CLAUSE MISAPPLIED.

FOLLOWING an editorial in the last issue of Hardware and Metal on a new development in the dumping clause, inquiries have been made among the different interests with which this paper is identified and amongst others the following incident has been brought to light.

A contract was entered into by a firm of importers in the City of Montreal for the purchase of a quantity of linseed oil on the London market. This contract was made about the middle of April last, the goods to be shipped in equal quantities, in the months extending from May to September, and the price agreed upon was 15s 3d per cwt., which was the market price in London on the date of sale. When the August shipment of this contract arrived the market had advanced, and in accordance with the Customs regulations the duty was charged on the market price at the time the entry was made. The amount of the invoice as rendered to the purchaser was in Canadian currency \$1,291, but the duty was appraised on a new valuation of \$1,402. In addition to this the importer was mulcted in a dumping duty of \$112, or exactly the difference between the price at which he purchased and the amended price as fixed by the Customs.

Any merchant doing business in Canada can appreciate the unfortunate position in which this importer has been placed by the misapplication of the

Dumping Act, especially when it is considered that goods purchased for forward delivery are usually sold for forward delivery at or about the same time that the original deal is concluded. Those familiar with the linseed oil trade know the close margin of profit on which this article is sold to the consumers throughout the country and they will at once come to the conclusion that in this special instance the importer suffered an actual loss.

It is to be concluded that the Customs authorities are dealing in a similar manner with other lines of goods which are of a fluctuating value and if so our Government has placed our merchants in a situation that is absolutely intolerable, such that immediate steps should be taken to provide a remedy.

A COMPLAINT.

THE truth of the old saying that "It is impossible to please everybody," was never more clearly demonstrated than it has been within the past few weeks in connection with the new customs revisions, popularly known as the anti-dumping regulations.

Exception is taken in certain quarters to the involved and verbose character of the declaration foreign exporters have to sign in order to secure the entry of their goods into Canada. All will agree that the utmost care is necessary in this particular if the home market is to be effectually protected against dumping. The difficulty is this: Practically ninety-nine foreign exporters out of every hundred know no more of conditions here than that they have goods and want to sell them to Canadian merchants.

If you were to ask them which is the specific and which the ad valorem duty they would throw up their hands in dismay. As a matter of fact, however, the new declarations not only pay scrupulous attention to such items, but require the exporter of Tarragona almonds, for instance, to make a declaration that his goods are of Spanish origin, and further that they are not from Germany. The foreign trade of Canada should be burdened with impedimenta of this sort as little as is compatible with perfect se-

cunity to the home market. Only a year ago a large firm of exporters in Bordeaux, France, made a direct complaint to the authorities in Ottawa, on the ground of the endless technicalities connected with the Canadian customs. In order to master the situation they contended that it would be necessary to employ a small army of special clerks if they expected to be master of Canadian trade conditions sufficiently to do business here. Such barriers should not exist, and particularly at this time when it is so essential to Canada to establish herself in foreign markets.

Much of the cause of complaint on the part of exporters would be removed if the new elaborate declarations were confined to manufactured goods. As it is they are uniform over the whole range of foreign produce and cover in addition all free imports which are in no way affected by the dumping clause. A great deal of unnecessary detail is thus imposed on a large class of exporters, who will find it oppressive even when the regulations are thoroughly understood, which is not the case in many instances, nor have they leisure for unravelling the tangle at seasons when they are engaged within the short period of two or three months in exporting the whole year's output to the various consumptive markets of the world.

A WARNING TO IMPORTERS.

HOW to evade the provisions of the dumping clause is a problem, which is taxing the ingenuity of not a few importers just at present. Canadian dealers, who for years have been accustomed to stock staple lines procured in the United States, Germany, Britain and elsewhere, now find that many of the articles thus purchased will henceforth be subject to the provisions of the dumping clause. The consequent increase in cost will lead to higher prices and a diminution in sales.

In order to obviate this several plans have been proposed. One scheme aims at outwitting the Customs officials by passing goods in under a special name. For example a brand of goods, which hitherto has been "dumped" into Canada, would be put in packages and cases

bearing a new name applicable solely to the Canadian trade. On the face of them these goods would not be saleable in the United States. They would be made for Canada. Unless, then the goods were proved to be identical with the United States products, they would pass through the Customs, unimpeded by the anti-dumping regulations.

Such action on the part of both the foreign exporter and the Canadian importer would be reprehensible. In the event of detection the latter only would be the sufferer and we take this opportunity of warning our Canadian dealers to beware of any such scheme for circumventing the Customs Department.

ENGINE AND BOILER SPECIFICATIONS.

MANUFACTURERS of engines and boilers throughout the Dominion are annoyed from time to time at the manner in which specifications are sent in, upon which they are called to tender. Invariably changes from standard makes and sizes are stipulated, which are of no apparent value, and for no valid reason other than to satisfy the fancy of the consulting engineer in charge of the installation at hand. In many cases, while the changes may be slight, the expense necessary to make such a change is out of all proportion to any real or fancied benefit derived by the alteration. The result is that the manufacturer is placed in a different position altogether in regard to bidding on the contract. If he bids on the specification as detailed he must exceed the regular price for such size or capacity of engine or boiler; and if he quotes regular stock price he is taking a chance of losing a large part of his profit in the expense necessary for making such a change.

Now that the different manufacturers are united and working together on a solid basis, the trouble might be eliminated without any great difficulty. Let the manufacturers and consulting engineers get in closer touch with each other, get better acquainted and discuss matters in common, and let them have a better understanding. When these are effected and they feel to a fuller extent that their interests are in common there

will no doubt be less to complain of in future specifications.

BUSINESS MAN WANTED.

AFTER years of constant endeavor to have the department of Trade and Commerce in the Dominion Government transferred from the charge of an incompetent to a qualified administrator, our efforts appear likely to be crowned with success.

Sir Richard Cartwright has simultaneously resigned his portfolio in the Dominion Cabinet and been elevated to the Senate. Practically his political career is ended. At such a time we cannot but refer with gratitude to the many disinterested services which for years he has rendered to the people of Canada.

That Sir Richard retired none too soon has been emphasized by the fact that it would have been practically impossible for him to secure his party's nomination in the constituency, which he has represented for so many years—a constituency which has an unique record for piling up enormous Liberal majorities.

While we have long advocated Sir Richard's retirement from the charge of the department of Trade and Commerce, we have not forgotten that true criticism must not be destructive only. Suggestions and advice for the reconstruction of what is destroyed must be offered.

In this instance, we have not been wanting. It will be remembered that when the Hon. Charles S. Hyman, of London, was first returned to parliament, we pointed him out as a man admirably qualified to discharge the functions of Minister of Trade and Commerce. At that time we advocated his substitution in place of Sir Richard Cartwright. To-day what we in a measure prognosticated seems extremely likely to come to pass. Sir Richard has been deposed and it looks as if Mr. Hyman would reign in his stead.

Our efforts in the direction of a reorganization of the department of Trade and Commerce have been wholly in the interests of the business men of Canada. Now that these efforts have been crowned with a measure of success, we cannot help but feel that the commercial interests of the Dominion will in future receive such a measure of attention as they have never before enjoyed.

Window and Interior Displays

Timely Hints and Suggestions

To the Window Dresser.

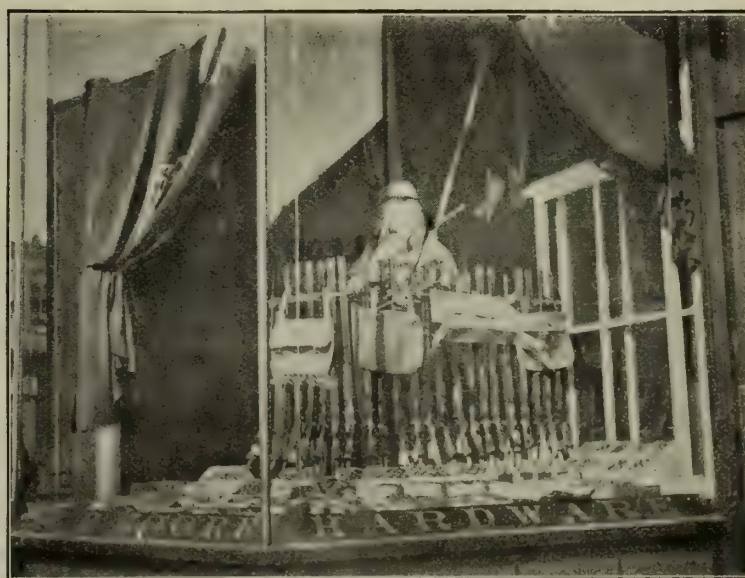
THE window dresser in the larger stores not only commands a greater salary but is allowed more freedom than any of the other employes. His work is more of an irregular nature; at the best it should be subjected to but little orders even from the proprietor, but at the same time always open to suggestions from the newest clerk. If the window dresser is merely a salesman who is supposed to crowd in window dressing with waiting on customers, he is nevertheless allowed latitude not accorded to the other clerks. He must have time to plan windows, to forage around and discover stock that is "sticking," and to arrange the display upon which he has decided. He should not be disturbed when building the window, and should be allowed as far as possible to adopt his own ideas.

Given a free hand, his aim should be to do his best to sell goods. And there is a difference between a display that sells and a display that attracts attention. All his spare moments will be filled in with working out the next window trim. To assist him in this several things are at his disposal. He can read trade journals, keep his eye open for attractive points in other windows, talk with travelers, and receive suggestions from anyone willing to give them. The trade newspapers are devoting more space than ever to window dressing, and any worth mentioning will contain valuable ideas and illustrations from time to time. Travel and a constant readiness to receive ideas from other windows are great hint-givers and the traveler, through his constant intercourse with merchants and their stores, can transfer to the window dresser, a design that can perhaps be copied in toto. After a few months experience new ideas will present themselves with far more frequency.

No window should be commenced without a definite plan to be followed in all the more important features, the details alone admitting of some freedom in working out. If this is followed much time will be saved and many

faults avoided. The goods shown should be of a special nature, very seldom those which might be called staples. The public knows that staples are carried, and a staple window will attract no one. The display should also consist of seasonable goods; in a careful study of this point exists much of the profit of window dressing. Lines should be displayed a few days in advance of the best selling period and then brought out more prominently during the proper season. In this way not only will customers be shown goods when they are needed, but they will be prepared beforehand for the needs of the season and

and apparent difficulty. The shape of the window is very unsuitable for trimming, as the back is wider than the front and one side only slopes back at an angle. Overhead and at the back were draped flags. The gun rack was built the shape of the window and had a red background. Inside it was the figure of a man made by stuffing a sweater. A pair of kid gloves and a shooting coat were put on. The head and neck are formed by a couple of sticks running down into the sweater and built out with white waste to the shape of the head. On the head was placed a wire mask and some unravelled Manilla rope to represent hair, which



A gun window—Arranged by Wm. S. King for C. P. Moore, Sydney, C.B.

know where to get the required articles.

Shop-worn goods should not be shown unless the fact is plainly mentioned as a cause for low prices. Price tickets and show cards are of value but both must be neat, and deception should not be practiced in the prices shown and remarks made.

The Illustration.

THE arms and ammunition window dressed by Wm. S. King for C. P. Moore, Sydney, C. B., is really simply built in spite of the good effect

was long enough to conceal the waste. On top was a shooting cap.

The figure was placed on a box of the required height, the red bunting inside the rack concealing all but the upper part. Cartridge belt, game bag and gun were in their place on the figure, the latter held up by a string from the ceiling. On the floor were arranged revolvers, cartridges, wads, reloading sets, cleaning rods, cans of powder, shot and different kinds and sizes of empty and loaded shells.

The scheme is an excellent one and speaks well for the efforts of the young window dresser who planned and built it.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Oct. 7, 1904.

Hardware.

ALTHOUGH general conditions seem hardly as conducive to business, there is more business reported this week than last, and a larger volume of trade is being done. Hardware dealers have experienced no feeling of uncertainty, or holding back on the part of merchants with orders, on account of the approaching elections, but report an unusually brisk trade. Fall orders are coming in in large numbers and travelers both east and west are meeting with more than usual success.

Prices are being well maintained and only one change is noted this week. There has been considerable reductions in coil chain, which market has been weak for some time in England. Inquiries are coming in in large numbers and collections are said to be good.

Food Choppers—These are still in season and a brisk trade is reported. Our quotations are as follows: Smallest size \$1.05 each net; medium family size \$1.20 each net; large family size \$1.35 each net.

Corn Cutters and Huskers—A brisk trade is still being done and many repeat orders are being sent in. We quote as follows: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Agricultural Wrenches—The demand for these continues fair. We quote: 6 in., \$2.85 a dozen 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Grindstones—A few orders are still being received for grindstones. Our quotations are as follows: 40 to 200 lbs., 2 in., and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in. thick and over, \$1.20; 11-2 in. thick and under 2 in., \$1.30.

Skates—A very brisk trade is being done in skates. The volume of orders in this line is exceedingly large and trade in them continues very active. Our quotations are as follows: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies nickel

plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50 nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concaved \$1.60 a pair.

Lanterns—These are moving well. We quote: Cold blast, \$7 a dozen; No. 0 Safety, \$4 a dozen.

Sleigh Bells—Stocks of sleigh bells are being completed rapidly for the Winter season, causing a lively demand. Our quotations are as follows: Brass team bells, rough \$1.80 to \$1.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

Shovels—In addition to the list of old shovels quoted before, snow shovels are quoted this week. There is a brisk trade being done. We quote: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Washing Machines—Very few of these are being sold at the present time. We quote: Round (three legs) \$35 per doz.; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Heavy Screw Hooks and Hinges—Trade is somewhat quiet. Our quotations are: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—A very brisk business reported this week. We quote \$2.25 per hundred pounds.

Barb Wire—Merely a nominal demand for barb wire. We quote as

follows: \$2.75 per 100 lbs, f.o.b. Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

Galvanized Wire—Little stock is moving at present. There is no change in price. We quote: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 8 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—The market is quiet and no change in price. We quote: \$2.65 per hundred lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—An ordinary amount of trade continues. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Screws—No great demand exists at present, but a fair amount of business is being done. The supply is still none too large. Discounts are: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—Activity has increased somewhat in bolts and nuts and trade is considerably better than for sometime past. We quote as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5

per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—It was mentioned last week that an early settlement of the wire situation was assured, but at present the prospects seem to be that an agreement is no nearer at hand than before, while prices are quoted as before, they do not represent the selling price. We quote as follows: \$2.40 per keg in car lots, \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Cut Nails—There is considerable cutting going on in this line, as well as in wire nails. The market is somewhat quiet. We quote: \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Pressed Spikes—No new feature to this market. Discount as before, 25 per cent.

Horseshoes—Considerable stock is moving and a fairly good trade reported. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—Business is brisk. Our quotations on list price: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. Other brands 55 and 57 1-2 per cent off list.

Shot Guns and Rifles—Although the season for these is pretty well on local dealers report numerous sales within the past week. Prices remain the same and are to be had on application.

Ammunition—An active market is reported. The reduction mentioned last week in American goods, owing to a revision of their lists still holds. We quote as follows: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps,

\$2 per thousand; C. B. caps, \$2.60 per thousand.

Shot—There is still a lively demand for nearly all sizes of shot. We quote as follows: Standard, \$6.50 per hundred lbs.; chilled, \$7 per hundred lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Roofing Pitch—Business is fairly good. Prices remain \$1 per cwt.

Building Paper—The building paper market continues firm and a satisfactory amount of business is reported particularly in country trade. We quote as follows: Tarred felt, \$1.85 per 100 lbs.: 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.: dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—Business is somewhat better than recently, but not as active as might be expected. We quote as follows: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement—As mentioned last week the cement business has commenced to pick up and this week sees a still further improvement and considerable business being done. We quote as follows: English, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel, ex store; and American, \$2.15 to \$2.35, ex cars.

Coil Chain—The demand has been light for coil chain and the market weak. Prices have been reduced considerably. New quotations are 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3, one inch, \$2.95.

METALS.

The metal market is in brighter condition at present than for many weeks past. Large consignments have lately been received and nearly all lines are moving well. The pig iron market is firmer and considerable local stock is being sold. The markets are nearly all firm with a general upward tendency.

Sheet zinc has advanced 10c a case and ingot tin 1-2c a lb. In scrap metal there is a decidedly better feeling. Copper has advanced 1 1-2c, brass from one quarter to one-half cent and on rubber a speculative advance of one-half cent a pound is noted.

Pig Iron—The market is improved and considerable local stock is moving. A new quotation is added to the list, being that of No. 1 Cleveland.

"Disc," No. 1.....	\$17.50 delivered Montreal
"Dom.," No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 " "
Glenarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.00 delivered Montreal
(special).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.90 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "
No. 1 Cleveland....	17.00 " "

Bar Iron—The rolling mills are unusually busy to keep up with the demand for bar iron, which is excessive for Fall shipment. We quote: Merchants' bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

Tool Steel—Business is only fair. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Merchant Steel—Less stock is moving and the market is somewhat quiet. We make the following quotations: Sleighshoe, \$1.77 1-2; tire, \$1.87 1-2; Spring, \$2.75; toe calk, \$2.37 1-2; machinery (iron finish), \$1.97 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.77 1-2; rivet, \$1.82 1-2.

Canada Plate—An active business is being done. Considerable stock being required for Fall heating work. Market is weak, but no change in price is noted. We quote as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—The market is somewhat firmer and there is now shading of prices. The demand continues good. Our quotations are as follows: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—The market is lively and prices firm, with no change what-

ever this week. We quote: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95. In less than case lots, 25c extra.

Sheet Zinc—An advance in price in sheet zinc is noted, while the demand is good. We quote: Case lots, \$6.35 to \$6.60, and small quantities, \$6.60 to \$6.85.

Tin Plates—A firmer market exists this week, with a fair demand. We quote: Cokes, \$3.75; charcoal, \$4.

Ingot Tin—There has been a slight advance in ingot tin, amounting to one-half cent a pound. Quotations are: 31 to 31 1-2c, with a further upward tendency.

Ingot Copper—Although no change in price is noted the market is somewhat firmer and an early advance is expected. We quote: 13 3-4c to 14c, the former price being for quantities only.

Ingot Zinc—There is no change whatever in this market. The demand is only fair. We quote: 5 3-4 to 6c.

Pig Lead—Lead has advanced within the past week and while the same prices are quoted there is now no shading whatever. We quote: \$3.25 to \$3.35.

Scrap Metal and Old Materials—There is a better feeling in scrap metals this week. Foundries are busier, but as yet are calling for very little stock, the most of which is being exported to Great Britain. Several changes in price are noted. Copper has advanced one and one-half cents, brass from one quarter to one-half cent, and old rubbers one-half cent a pound. We quote: Heavy copper and wire, 11 1-2 to 12c; light copper, 10 1-2 to 11c; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 1-2 to 8 1-2c; light brass 5 to 5 1-2c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$11; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs; old rubbers, 5 1-2c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,

10 Front street east.

Toronto, Oct. 7, 1904

Hardware.

BUSINESS in seasonable lines continues in large volume. An improved demand for quick delivery of nails, window glass and putty is reported while the active inquiry for sporting goods, cutlery, sleigh bells and other Winter lines continues. Prices are steady throughout, the wholesale dealers having confirmed quotations on rivets and burrs, bolts and nuts, lead pipe and shot and other minor lines. In window glass the prices have been advanced materially on account of the difficulty of securing stocks. Several of the foundries are having difficulty in filling their orders for stoves, the demand from the Northwest being particularly keen.

Lawn Mowers—Prices for 1905 are as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discounts 50 per cent. with freight concessions in quantity shipments.

Guns and Ammunition—There is still a good movement in anticipation of the deer hunting season.

Washing Machines—A fair trade is doing. Prices are unchanged. Our quotations are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Chain—We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders; Waggoner extension ladders, 40 per cent. off list.

Barb Wire—The trade is beginning to manifest some interest in the line for next season. We quote as follows: \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—A fair inquiry is reported with prices unchanged as follows: No. 5, \$3.45; Nos. 6, 7 and

8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Inquiries continue regarding prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—An improvement in the demand is reported. Nominally prices remain unchanged at \$2.45 per keg f.o. b. Toronto, with car loads at \$2.40.

Cut nails—A better business doing, with prices steady at \$2.30 per keg f. o. b. Toronto and Hamilton.

Horseshoes—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are: "C" brands, 40 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—Prices continue decidedly firm. A good movement is reported. We make the following quotations: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Prices have been confirmed. A good business is doing. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—Business keeps good at steady prices. We quote: Carriage bolts, common, (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND.

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

Drummond McCall & Co.

MONTREAL, QUE.

or to

Canada Iron Furnace Co.

MIDLAND, ONT.

Limited

We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

sizes, 4 1-4c per lb.; square, 4c per lb.

Woodenware—We quote: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2.00; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c; Davis clothes line reels, 40 per cent. off list.

Cordage—Our quotations are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sash cord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5-32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—As the contractors are making a special effort to make up the time lost during the recent strike trade is certainly very brisk. The hardest question at present for the manufacturers to answer is: How can all the orders be filled? The demand is stronger than the supply. Prices are unchanged. Prices quoted are as follows: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Firebrick—At present there is a better inquiry from the country for this article. People there are taking advantage of this being the slack part of the season and are doing a good amount of repairing. The price list still remains unchanged. Our quotations on prices are as follows: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Cement—During the week the demand for cement has increased. Contractors are taking advantage of the good building weather and are trying to make up for the time lost during the recent strike. Since last issue the price of Canadian and American Portland has declined from 5 to 10c. This decline is caused by keen competition. The outlook is for brisk trade till the end of the season. Prices quoted by us for the

IRON STEEL and METALS

Close prices to wholesale buyers only.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

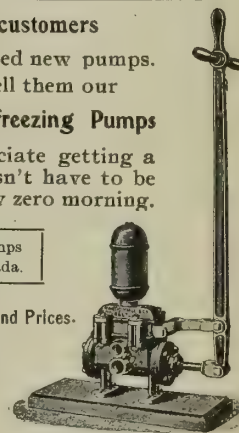
Ask your customers
if they don't need new pumps.
If they do, sell them our
Standard Anti-Freezing Pumps
They'll appreciate getting a
pump that doesn't have to be
thawed out every zero morning.

McDougall Pumps
—Made in Canada.

Write for Catalogue and Prices.

The
R. McDougall Co.
Limited

Galt, Ont.



"ALPHA"

HIGH SPEED STEEL
Crucible Cast Steel
for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

SHEFFIELD, ENG.

Agents for Ontario:

BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

trade are as follows: Canadian Portland, \$1.70 to \$1.90; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex store; American Portland \$1.70 to \$1.90 f.o.b. Toronto.

METALS.

The stiffening of prices in ingot metals continues a feature of the situation. Tin and copper have slowly but steadily advanced and are still strong in England. Pig iron is stronger at the moment in the United States than has been the case for some time. The volume of business done continues to increase. Canadian iron furnaces are now working full capacity and some importing is being done.

Pig Iron—The anti-dumping clause has undoubtedly had some effect on iron imports from the United States, yet there is still some importing done. The Canadian furnaces are not having any difficulty in disposing of their stocks and are consequently maintaining their prices quite firmly. We quote:

Middleboro, f.o.b., Toronto.....	\$18 70
Hamilton, No. 1	\$17 50 to 18 00
" No. 2	17 00 to 17 20
" No. 1, Hamilton	16 25 to 16 55
Midland, No. 1	17 00 to 18 00
" No. 2	17 00 to 17 25
" No. 1 f.o.b. Midland.....	16 25 to 16 75
Radnor, f.o.b. furnaces.....	27 50
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—The market continues strong, the advance of 5c being well maintained. Our quotations are now as follows: \$1.80 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—A large trade is doing in steel, the improvement in the demand for tool steel being particularly noticeable. We quote: "M" self-hardening, 50c; "Alpha" high speed, 65c; Morton's tool steel 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—Prices have been steadily advancing in the British market for some time, but so far there has been no change locally. A good trade is doing. We quote from 30 to 31c.

Galvanized Sheets—A good steady movement is reported. Prices are steady. We quote as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25

WALTER GROSE, 30 St. Dizier St., Montreal.

Sole Selling Agent for the

Nicholson File Co., Providence, U.S.A.

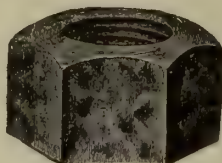
G. & H. Barnett Co., Philadelphia.

Nicholson File Co., Port Hope, Canada.

Ontario Lantern and Lamp Co., Limited, Hamilton.

Plume & Atwood Mfg. Co., Waterbury, Conn.

ORDERS SOLICITED FROM THE WHOLESALE TRADE.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs, Etc. Cold Punched Nuts of every variety of finish.

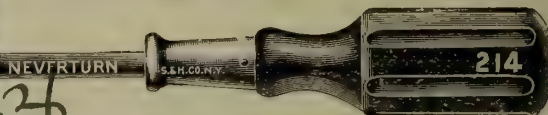
INGERSOLL, ONT.

NEVERTURN SCREW DRIVERS.

Do not keep your customers waiting. Order to-day.

Made of Bor-
rasic steel
with steel
ferule and
hardwood
handle.

RETURNED
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Send for Green Book of Hardware Specialties.

Smith & Hemenway Co.,

Mfrs. of Cutlery and Hardware Specialties

Utica Drop Forge & Tool Co.

Mfrs. of Nippers and Pliers.

204 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL, ALLEN C. JENKING, Canadian Manager.

GILBERTSON'S

COMET
ALEXANDER GIBB, Agent,

Brand Galvanized Sheets

cost less than some other brands, but will do you work equally well—every sheet guaranteed.

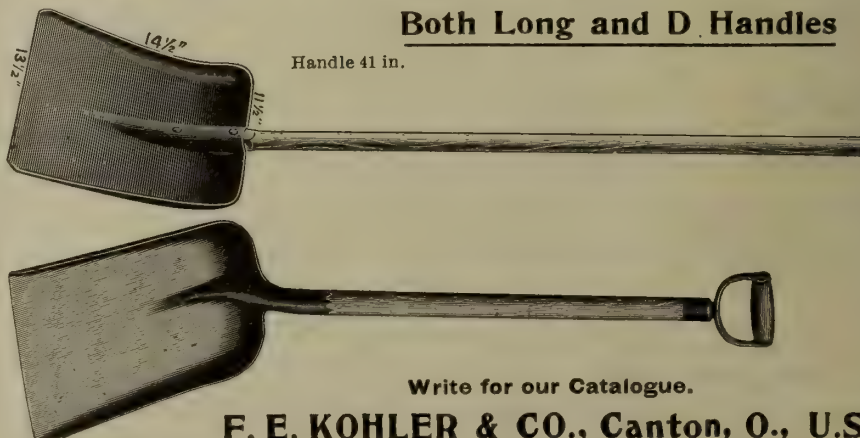
W. GILBERTSON & CO., Limited, Makers,
Pontardawe, South Wales.

MONTREAL.

SNOW SHOVELS, FURNACE SCOOPS

Both Long and D Handles

Handle 41 in.



Write for our Catalogue.

F. E. KOHLER & CO., Canton, O., U.S.A

for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tin Plates—An excellent demand continues, with prices steady. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—Though there has been some fluctuating prices are now higher than for some time. We quote in ton lots as follows: Ingot copper, \$13.25 to \$13.50 and sheet copper \$20 per 100 lbs.

Brass—This market is more active this week. Discounts are steady at 15 per cent.

Lead—A steady trade continues. We quote: \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—There has been a falling off in demand during the week. Prices are from 53-4c to 6c per lb.

Solder—This market has picked up and is active. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wip- ing 16 1-2 to 17c.

Old Material—The market in general has a better appearance to-day than it had a week ago. The demand for metals has increased and during the week the price of "Heavy Copper" has advanced 1-2c per lb; "light copper" has advanced 1-4c and zinc 1-4c per lb. More inquiry for old rubbers with the result of an advance of 1-2c per lb. Stove-plate has become firmer and the price has changed from \$7 and \$9 to \$8 and \$9. Other prices remain unchanged. Quotations given by us on Old Material are: Heavy copper and wire 103-4c per lb.; light copper, 93-4c per lb.; heavy red brass 91-4c per lb; heavy yellow brass, 7 to 71-2c lb.; light brass, 5 to 51-2c per pound; tea lead, \$2.20 per 100 lbs; heavy lead \$2.40 to \$2.50 per 100 lbs.; scrap zinc, 31-2c per lb.; iron, No. 1 wrought, \$7 to \$9; No. 2 wrought, \$2; machinery cast scrap, \$10 to \$12; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers 51-2c per lb; country mixed rags, 65c per 100 lbs.

PETROLEUM.

No change in the conditions of trade on this market. Prices are unchanged. We quote: Refined Canadian water white, 18c; Canadian prime white, 161-2c; American water white, 181-2c ex warehouse; crude, Pennsylvania, \$1.56; Lima, \$1.05; Canadian, \$1.53.

LONDON METAL MARKET.

From the Metal Market Report, October 3, 1904.

Pig Iron—Scotch warrants, Glasgow, closed at £50 6s, an advance of 3s; Middleboro, No. 3, foundry, at £43 6s, an advance of 6s in the week.

Tin—Spot tin opened strong at £129 2s 6d; futures at £128 17s 6d, and after sales of 360 tons of spot and 230 tons of futures closed strong at \$129 5s for spot and £129 for futures, making price as compared with a week ago £1 10s for spot and £1 15s for futures.

Copper—Spot copper opened firm at £58 12s 6d, futures at £58 13s 9d, and after sales of 300 tons of spot and 500 tons of futures closed firm at £58 17s 6d for spot and £58 18s 9d for futures, making price as compared with a week ago 10s higher on spot and 11s 3d higher on futures.

Lead—The market closed at £11 18s 9d, making price 1s 3d higher than a week ago.

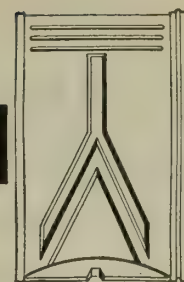
Spelter—The market closed at £22 5s, an advance of 10s in the week.

COOPER'S IMPROVED ELBOW.

E. T. WRIGHT & CO., Hamilton, have gone to great expense in getting out a new elbow, to be known as Cooper's Improved Elbow. It is a 16-cripped, plain black elbow, perfectly curved and smooth, so has no projection to collect the dust or soot. It has taken about four years to perfect this elbow, the firm having continually improved this elbow since purchasing patent and plant from the Cooper, Fairman Co., Montreal. It can be adjusted to fit any size stove pipe. **E. T. Wright & Co.**, also manufacture Scheip's Patent Knock Down Stove Pipe. This pipe is constructed so that it will not telescope. It is packed in crates, 25 lengths to the crate. Further information will be readily given to readers of Hardware and Metal.

WILL ERECT A MODEL WAREHOUSE.

The spirit of Canadian progress and enterprise is well illustrated in the new move being made by Lewis Bros., of Montreal. They are about to erect a handsome building in that city to accommodate their fast increasing business. One of the members of the firm, together with the architect, has visited all the most important wholesale establishments in the United States, and the best features found there are to be embodied in the new building. When finished it is expected to be one of the most substantial and up-to-date hard-



EMPIRE SHINGLES

[Made of Tinned Steel.
Galvanized or Painted.

The only shingles made that are fully formed into shape first, and galvanized afterwards—no acids being used.

As a result, galvanized Empires have no raw edges or cracked surfaces exposed—they are the perfection of roof covering—absolutely fire, lightning and rust proof.

When you wish THE VERY BEST order EMPIRES.

METALLIC ROOFING CO.

WHOLESALE MANFRS. LIMITED
TORONTO, CANADA.

ware warehouses in the Dominion. It is to be built on Bleury street, two doors above Craig, and extending to Herminie, on the property formerly occupied by the late N. H. Tabb, manufacturer of sleigh bells. The building is to be six stories high, together with a basement, and will cover 20,000 square feet ground surface.

BUSINESS CHANGES.

ONTARIO.

M. WALKER, hardware merchant and implement dealer, etc., Florence, has sold hardware to Thos. H. Cragg.

Frank Rosser, hardware merchant, Ailsa Craig, has sold out.

Olive A. Tutt, hardware merchant, Dorset, has sold to McKay & Co.

Edward Tompkins, hardware merchant, Emo, has sold to W. J. Holmes.

F. M. Souch, hardware merchant, Bowmanville, has advertised business for sale.

Robertson Varnish Co., Limited, Toronto, have sold out to Victor Varnish Co., Limited.

QUEBEC.

A. Guimond & Co., hardware merchants, Montreal, are offering 25c on the dollar cash.

Guindon & Co., hardware and crockery dealers, Valleyfield, have dissolved partnership, J. M. Guindon continues.

NOVA SCOTIA.

Zachariah McKee, grocer and hardware dealer, Parrsboro, has registered consent for his wife, Georgina McKee, to do business in her own name.

Merrick, Anderson & Co.

NORTHWEST DISTRIBUTORS

WINNIPEG.

"Hot Blast"

Line for Coal.

For Soft, Hard or Lignite Coal, Coke, Etc.

Made by the D. Moore Company,
of Hamilton.



Heavy
draw
centre
shaking
grate and
lining.
Heavy or-
namental
legs and
base.

STRATHCONA HOT BLAST

KNOWN EVERYWHERE.

MANITOBA DEPOT

Merrick, Anderson & Co.
117 Bannatyne St. East, - Winnipeg.



STRATHCONA DOUBLE HEATER

No.	Diameter of Body.	Approximate Shipping Weight.
1115	15 inches.	134 pounds.
1118	18 "	174 "

THE weekly report on the wheat question shows that everywhere cutting is finished and that threshing has again commenced after the long spell of wet weather, which has delayed the farmers to a great extent. With a yield on an average of 20 bushels to the acre, the crops are generally better than first anticipated. Business is bright but collections are a little slow. The market continues with little or no change of any account.

* * *

Mr. J. A. McTaggart, who has been with Miller, Morse & Co., for the past fifteen years, nine of which he has represented them on the road, is severing his connection with that firm. Mr. McTaggart is starting in the hardware and lumber business at St. Peters and Humboldt, two prospective towns on the C. N. R. Grand View extension.

* * *

An explosion occurred at the gas plant of the Carberry Gas Co., Carberry, Man., last week. The west side of the building was blown out and demolished, but the plant was not materially damaged. Mr. William Tripp, the local manager, was in the upstairs of the building at the time, but escaped with a few slight burns. It is expected that the plant will be in working order again in a day or two.

* * *

We quote :

Barbed wire, 100 lb.....	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91
Annealed wires (unoiied) 10c. less.	
Horseshoes, iron, No. 0 to No 1.....	\$4 75
No. 2 and larger....	4 45
Snow shoes, No. 0 to No. 1.....	4 20
No. 2 and larger....	4 45
Steel, No. 0 to No. 1.....	4 60
No. 2 and larger....	4 45
Horsenails, No. 4-1 1/2 in., list price.....	0 48
" " 5-2 " ".....	0 32
" " 6-2 1/2 " ".....	0 28
" " 7-2 1/2 " ".....	0 24
" " 8-2 3/8 " ".....	0 22
" " 9-2 1/2 " ".....	0 20
" " 10-2 1/2 " ".....	0 20
" " 11-2 1/2 " ".....	0 20
" " 12-2 1/2 " ".....	0 20
" " 14-3 1/2 " ".....	0 20

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

Office of HARDWARE AND METAL

Room 515 McIntyre Block,

Winnipeg, Oct. 3, 1904.

Cut Nails—		Wire Nails—	
2d 1 in.....	\$4 10	1 in.....	4 15
3d Fin. 1 1/4 in.....	4 10	1 1/4 in.....	4 10
3d 1 1/4 in.....	3 75	1 1/2 ".....	3 70
4d 1 1/4 in.....	3 50	1 3/4 ".....	3 50
5d 1 1/4 in.....	3 50	1 1/2 ".....	3 50
6d 2 in.....	3 40	2 ".....	3 40
8d 2 1/2 in.....	3 25	2 1/2 ".....	3 25
rod 3 in.....	3 20	3 ".....	3 20
2od 4 in.....	3 15	3 1/2 ".....	3 15
3od 4 1/2 in.....	3 10	4 ".....	3 10
4od 5 in.....	3 10	4 1/2 ".....	3 10
5od 5 1/2 in.....	3 10	5 ".....	3 10
6od 6 in.....	3 10	5 1/2 ".....	3 10
		6 ".....	3 10
Bar iron (basis).....	2 50		
Swedish iron (basis).....	4 75		
Sleigh shoe steel.....	2 85		
Spring steel.....	3 25		
Machinery steel.....	3 50		
Tool steel, Black Diamond, 100 lb.....	8 50		
Jessop.....	13 00		
Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50		
18 to 22 gauge.....	3 75		
24 gauge.....	3 90		
26 gauge.....	4 00		
gauge.....	4 10		
Galvanized Iron, Apollo, 16 gauge.....	4 00		
18 and 20 gauge.....	4 00		
22 and 24 gauge.....	4 25		
26 gauge English or 28 American..	4 25		
28 gauge.....	4 50		
30 gauge or 10 1/2 oz.....	4 75		
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.			
Queen's Head, 24 gauge.....	4 25		
26 gauge.....	4 50		
28.....	4 75		
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.			
Genuine Russian, per lb.....	11		
Imitation ".....	07 to 08		
Tinned, 24 gauge, 100 lb.....	8 00		
26 gauge.....	8 05		
Tinplate, IC charcoal, 20 x 28, box.....	9 50		
" IX.....	11 50		
" IXX.....	13 50		
Ingot tin.....	35		
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00		
Canada plate, full polished.....	3 75		
Sheet zinc, cask lots, 100 lb.....	7 00		
Broken lots.....	7 50		
Pig lead, 100 lb.....	5 00		
Black iron pipe, 1/2 inch.....			
" 3/4 ".....			
" 1 ".....	2 80		
" 1 1/4 ".....	3 25		
Black iron pipe, 3/4 inch.....	4 20		
" 1 ".....	5 85		
" 1 1/4 ".....	8 20		
" 1 1/2 ".....	10 00		
" 2 ".....	14 00		
Rope, sisal, 7-16 and larger, basis.....	10 75		
Manila, 7-16 and larger, basis.....	15 25		
Lathyrn.....	11 25		
Solder.....	20		
Axes, chopping.....	\$ 6 75 to 12 00		
" double bitts.....	12 00 to 18 00		
Bluestone.....	5 25		
Screws, flat head, iron, bright.....	85 and 10 p.c.		
Round ".....	80 p.c.		
Flat " brass.....	75 and 10 p.c.		
Round ".....	70 and 10 p.c.		
Coach.....	70 p.c.		
Bolts, carriage, 3/4 or smaller.....	60 and 5 p.c.		
" 7-16 and up.....	55 p.c.		
Bolts, machine, 3/4 and under.....	55 and 5 p.c.		
" 7-16 and over.....	55 p.c.		
Bolts, tire.....	60 and 5 p.c.		
Bolt ends.....	55 and 5 p.c.		
Sleigh shoe bolts.....	70 p.c.		
Machine screws.....	70 p.c.		
Plough bolts.....	55 and 5 p.c.		
Square nuts, case lots.....	3c. discount.		
" small lots.....	2 1/2 c.		
Hex " case lots.....	3c.		
" smaller lots.....	2 1/2 c.		
Rivets, iron.....	50 and 10 p.c.		
Copper, No. 8.....	32		
No. 12.....	36		
Coil chain, 3-16 inch.....	9 1/2		
" 1/2 inch.....	7 1/2		
" 5-16 inch.....	5 1/2		

"	3/4 inch	5 1/4
"	7-16 inch	4 1/4
"	1/2 inch	4 1/4
"	3/4 and 1/2 inch	4
Spades and shovels	40 and 5 p.c.	
Harvest tools	60 p.c.	
Axe handles, turned, s.g. hickory, doz..	\$3 15	
No. 1	1 90	
No. 2	1 60	
Octagon extra	2 30	
No. 1	1 60	
Files common	70 and 10 p.c.	
Diamond	60 p.c.	
Building paper:		
Anchor, plain	65c.	
" tarred	70c.	
Pure fibre, plain	67 1/2c.	
" tarred	80c.	
Ammunition, cartridges, Dominion R.F.	50 p.c.	
Dominion, C.F., pistol	30 p.c.	
" military	15 p.c.	
American R.F.	30 p.c.	
C.F. pistol	5 p.c.	
C.F. military	10 p.c. advance.	
Loaded shells:		
Eley's soft, 12 gauge black	15 00	
chilled, 12 gauge	16 00	
soft, 10 gauge	18 00	
chilled, 10 gauge	19 00	
Shot, Ordinary, per 100 lb	6 00	
Chilled	6 55	
Powder, F.F., keg	4 70	
F.F.G.	5 00	
Tinware, pressed, retinned	70 and 10 p.c.	
" plain	75 and 2 1/2 p.c.	
" pieced		
Japanned ware	37 1/2 p.c.	
Enamelled ware, white	45 p.c.	
" Famous	50 and 10 p.c.	
" Imperial	50 and 10 p.c.	
Green Wire Cloth	1 55	

PETROLEUM.

Water white American	27 1/2c.
Prime white American	25 1/2c.
Water white Canadian	25 1/2c.
Prime white Canadian	24 1/2c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2	7
Wrought iron scrap	5
Copper (heavy)	8 1/2c. per lb.
Yellow brass (heavy)	7 1/2c.
Light brass	5c. to 6c.
Lead pipe, or tea lead	2c. to 2 1/2c.
Zinc scrap	1c.

PAINTS, OILS AND GLASS.

White lead	\$5 00 to \$5 50
Putty in bladder, 2 1/2 lb., in keg of 100 lbs.	0 02 1/2
Turpentine, pure, in barrels	\$ 0 87
Less than barrel lots	0 92
Linseed oil, raw	0 55
Boiled	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.	
Lubricating oils, heavy castor machine	0 29
" " extra engine	0 37
" " dynamo	0 25
" " black	0 22
" " cylinder	\$0 50 to 0 75
(as to quality)	
Harness oil	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00 1/2
" 2nd pressure	1 09 1/2

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B. C., Sept. 30, '04.

THE Government of British Columbia has gone into the second hand machinery business on a large scale. Timber Ranger John Murray, acting on the advices of the timber inspector's office here, has made five seiz-

ures of logging camps, and a number of large booms of logs. These all belonged to operators in the country in the southern part of the Fraser River delta, this side of the boundary, bordering on the Nicomekl River and Semiahmoo Bay. The value of the outfits is over \$100,000, and unless settlement is made they will be offered by auction to cover the amount due under the special tax.

The Government officials claim these operators, who are mostly Americans taking out logs for the Monarch and Erie Lumber companies of Blaine, have knowingly transgressed the laws, and that because the land lies so close to the boundary they run the risk of trying to take out logs and ship them to the other side contrary to law, unless the special tax of \$1 per thousand were paid. On the other hand, the men plead ignorance of location, saying they thought they were cutting on Dominion Government crown lands. It is also stated that some of the large timber owners, Dunsmuir on Vancouver Island, Merrill of Wisconsin, who owns great tracts of fine timber here, the E. K. Wood, Co., of Blaine, and Palmer of the Chemainus mills, are to combine in the expense of trying a test case, namely, that the special tax imposed last session does not apply to timber on crown lands granted prior to 1887, the land in the present instance being under that category.

* * *

Mr. John Hanbury, of Brandon, Manitoba, largely interested in the west, has evolved a scheme which he says will help out the small mills in East Kootenay. His idea is to erect a large sash and door and finishing factory at Elko on the Crow's Nest branch of the C. P. R., with planing mill, dry kiln and other accessories. His plan is to buy up the product of the small mills in the rough, which will relieve them of the expense of finishing, etc., which he thinks will be of great assistance to them. The plan should be a good one, as it will afford a direct market right at home for the small concerns, and will tend to keep prices firm.

* * *

The C. P. R. is discussing the big scheme of tunnelling under the mountain between Glacier and Bear Creek, so as to avoid a very heavy haul over the track at Rogers Pass. The tunnel, if carried out, will be about three miles long, and while it will cost a considerable sum it is thought that it will be more than made up by the saving in expense of hauling, time, and the cost of maintaining snow sheds.

The municipality of North Vancouver has let the contract to put in a system of waterworks to Mr. J. Williams. The length of the main to bring the water from Lynn Creek will be 5 1/4 miles,

wooden pipe to be used, with wire strengthening. For the first mile it will be 12 inches in diameter, and 10 the remainder of the distance. Distributing pipes are additional. The pipe will be manufactured in Vancouver.

The B. C. Electric Railway Co., which has its head offices in this city, will build large new terminal facilities in Vancouver early in the Spring. These will include general offices, the present accommodation being altogether too small. This company recently took over the Vancouver Cas Co.

Mr. Hurst, designer for the Risdon Iron Works, of San Francisco, was in Ashcroft last week examining the plant of the Ashcroft Electric & Improvement Co., with a view to its betterment. He also inspected the new pumping plant of the Iron Mask mine at Kamloops and the waterworks of the latter city.

The Kamloops Coal Co. has made a good strike on its claims, and the capital has been increased to provide money for the development of the property, which will be proceeded with immediately. Kamloops is busy now with the operations on this property, and also in connection with the Iron Mask mine, where the concentrator, recently installed, has been found to work very satisfactorily.

English capital has been enlisted to assist in the development of the mines of the Princess Royal Mining Co., on Princess Royal Island, in which Premier Tweedie and other New Brunswick people are interested. Premier Tweedie is at present in Vancouver on business in connection with the matter.

The Vancouver Power Co., a subsidiary company to the B. C. Electric Railway Co., expects to have its two-mile, nine by nine tunnel completed by next May. Over nine thousand feet have already been bored.

The partnership in the Sandon Hardware Co., at Sandon, has been dissolved by mutual consent. Mr. J. W. Power will still continue the business in the old firm's name.

James Lawrence, formerly manager of the Ashdown Hardware Co., has been given the charge of the branch of the company at Nelson, and has moved thither.

W. Cowan, manager of the Revelstoke Telephone Co., is making improvements in the system.

C. J. Wilkes, of Revelstoke, has just installed in connection with his blacksmith and machine shop one of the latest and most up-to-date lathes manufactured by F. W. & John Barnes Co., of Rockford, Ill.

Some very extensive real estate transfers have taken place in Vancouver recently, and it is very probable that large building operations will be conducted next year.

CONSIDERED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
" " 6 months.....	10 00
25 " " 1 year.....	10 00

SITUATIONS VACANT.

HARDWARE CLERK—First-class salesman and stock-keeper; wants position by first of month. Box 177, HARDWARE AND METAL, Toronto. (41)

TRAVELLER WANTED—For Eastern Ontario ground; to sell brooms, brushes and woodenware; none but capable, energetic, strictly temperate man need apply; experience in same line preferred; position good and permanent. Thomas Bros., Limited, St. Thomas, Ont. f

WANTED—Man well posted on paints, brushes and ammunition for Western Canada, to take charge of these lines for jobbing firm. Good opening for a hustler. Apply Box 174, HARDWARE AND METAL, Toronto. (42)

WANTED—Position in good retail hardware, by young man with two years experience in wholesale. Best references. Box 177, HARDWARE AND METAL, Toronto. (42)

HARDWARE SALESMAN—At once; accustomed to stoves and housefurnishings. State experience and salary. G. H. White, Orillia. (41)

BUSINESS CHANCES.

A VERY desirable and successful business; stock about \$7,000, principally hardware; situated in the busiest centre of the town; largely cash trade and in splendid running order; the premises can be bought or rented; established since 1837; proprietor retiring only reason for selling. For further particulars address F. J. Wilson & Co., Buckingham, Que. (41)

A FIRST-CLASS blacksmith stand, in the village of Oakland, for sale or to rent. Apply John Hoffmann, Oakland, Ont. f

GENERAL store and postoffice—nine miles from Woodstock, Oxford County; stock and premises can be bought for two thousand dollars, part cash, balance on satisfactory security. Further particulars from J. Wadland, Woodstock. f

FOR SALE.

FOR SALE—Good paying tinshop; good dairy trade; large eavetrough business; everything complete for the work; stock, tools, horse, rigs, cheap. R. B. Scriven, Otterville, Ont. (48)

MECHANICS WANTED.

BLACKSMITH—general—job for years; pay weekly. Barclay Jardyn, Hamilton. f

THE PITTSBURGH METAL MARKET.

From the Iron Trade Review, Oct. 6, 1904

Pig Iron—Heavy sales of pig iron during the past month have stiffened the market considerably, the minimum on forge now being \$12 Pittsburg, and Bessemer is held at the same price at the furnace. On No. 2 foundry \$12.70 Pittsburg is the general market price, while some furnaces are holding their product at \$12.85. Though iron has been sold for delivery through the first quarter of next year, most of the furnaces refuse to entertain offers for that delivery at as much as 25 cents advance over to-day's prices. One large buyer of foundry and forge iron originally in the market for 2,000 tons, purchased 10,000 tons. Iron mills in this district have pretty generally covered their requirements to the end of the year, and one furnace is no longer quoting on forge for delivery this year, and will not entertain offers for next year's delivery. One large buyer of mill iron is in the market at present for 8,000 tons, but the business will hardly be placed this week. Bessemer iron is firm at \$12 Pittsburg, and for delivery into next year \$12.25 at the furnace is asked. We revise quotations as follows:

Bessemer, Valley	\$12 00 to	\$12 10
Bessemer, Pittsburg.....	12 85 to	12 95
No. 1 Foundry.....	13 00 to	13 25
No. 2 Foundry.....	12 70 to	12 85
Gray forge, Pittsburg.....	12 00 to	12 10
Chilled basic, Valley.....	11 65 to	11 75
Chilled basic, Pittsburg.....	12 50 to	12 60

Steel—The buying of billets and sheet bars continues in small lots only, and no credence can be placed on the reports of shading, as not sufficient tonnage has been offered the mills to make lower prices an inducement. We make the following quotations: Bessemer and open-hearth billets, 4x4 inches, and slabs, up to and including 0.25 carbon, \$19.50 f.o.b. mill, Pittsburg, with actual freight added to point of delivery; 0.26 and including 0.60 carbon, \$1 advance; 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 4x4 inches, \$2 advance; sheet and tin bars, \$2 advance. Bessemer and open-hearth rods are held at \$25 to \$25.50.

Plates—The Pennsylvania Railroad Co.'s order for 600 steel cars was divided between the Pressed Steel Car Co. and the Cambria Steel Co. To fill this contract about 6,000 tons of plates will be required. Specifications on plate contracts have increased slightly, but the reduced prices have had nothing to do with the increased tonnage now entering the mills. Further business from lake

shipyards is expected to be of considerable amount. We quote: Tank plate, 1-4 inch thick, 61-4 to 24 inches, inclusive, 1.30c f.o.b. mill, Pittsburg; over 24 inches up to 100 inches, 1.40c. Extras are as follows per pound; Flange and boiler steel, 10c; marine, A. B. M. A., and ordinary fire box, 20c; still bottom, 30c; locomotive fire box, 50c; plates over 100 inches up to 110 inches in width, not less than 5c per 100 lbs extra; plates 110 inches to 115 inches wide, not less than 10c extra; 115 to 120 inches, 15c extra; plates 125 inches to 130 inches, not less than 50c extra; plates 130 inches wide, not less than \$1 extra; plates 3-16 inch thick, \$2 extra; gauges 7 and 8, \$3 extra; No. 9, \$5 extra. Five cents extra for less than carloads. Terms net cash in 30 days, and for all points of delivery in the United States except the Pacific coast.

Sheets—The sheet market shows little improvement, and on an occasional lot 2c is quoted by some of the mills. Most of the sheet producers are asking 2.10c and are having little difficulty in securing this price on 28 gauge.

Wire and Wire Nails—The demand for nails and wire products is reported somewhat better and there is absolutely no shading in this market, although lower prices continue to be reported from the west. We make the following quotations: Wire nails, jobbers' carload lots, \$1.60; retailers' carloads, \$1.65, and less than carloads, \$1.75; painted barb wire, \$1.75 to jobbers in carloads; retailers' carloads, \$1.80, and less than carloads, \$1.90, with 30 cents for galvanizing. Annealed smooth fence wire is held at \$1.45, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburg, 60 days, with 2 per cent. discount for cash in ten days. Iron and steel cut nails are held at \$1.65 to \$1.70.

Merchant Steel—Demand for steel from machinery manufacturers is reported improving, although the gross tonnage that is being offered the mills is not great. There is no change in the shafting situation and no great improvement will come in this line until there is more new construction than there is going on at present. We quote as follows: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.50c to 1.55c; plow steel, 6 inches and under, 1.35c for Bessemer and open-hearth; plow slabs, 1-4 inch and heavier, 1.60c. Drawn and cold rolled shafting is held at 52 per

cent. off in earload lots and 47 off in less than earload lots.

Pipes and Tubes—A slightly better demand is reported, and there is less shading on merchant sizes. Large orders for line pipe are pending.

Bars—Agricultural implement manufacturers are now sending in heavy specifications for bars for delivery beginning next month.

Coke—While the H. C. Frick Co. is blowing in all its available idle ovens, the independent producers find little improvement in demand and prices continue low. Attention has been directed to its greatly enlarged coke production, which has suggested the possibility of a coke accumulation such as was maintained under the old Carnegie regime. Several coke contracts have been closed during the week, deliveries extending to July next year at \$1.90 for strictly Connellsville foundry, an exceedingly low price when the extended delivery is considered. High grade Connellsville foundry coke is selling at \$1.75 to \$1.85, and furnace at \$1.40 to \$1.45. For the week ending September 23 the production of the upper region amounted to 215,683 tons and lower to 60,460 tons.

PERSONAL MENTION.

Mr. Walter Grose, Montreal, was in Quebec during the week on business.

Mr. W. S. Leslie, of A. C. Leslie & Co., Montreal, was in Toronto this week.

Mr. David Brocklebank, hardware merchant, of Arthur, Ont., was in Toronto this week.

Mr. G. R. Lawson has bought the implement business and shop of A. L. Trace, of Elmvale, Ont.

Mr. J. E. Elliott, buyer for McLennan, McFeely & Co., Limited, Vancouver, is now on a business trip to Eastern Canada.

Mr. David P. Brown, manager of the Brown Machine Co., New Glasgow, N. S., was married last week to Miss Gertrude Douglas, daughter of Geo. A. Douglas, of New Glasgow.

Mr. Geo. Evans, hardware dealer, Bright, Ont., was married on Wednesday last week to Miss Olive Sault, daughter of James Sault, Plattsville, Ont.

Mr. George Boyd, of the Montreal Rolling Mills, whose marriage to Miss Harte, of Montreal, took place recently, is expected home at the end of this week. The wedding tour included a trip to the Pacific Coast, with stops at

Banff, Glacier, and Winnipeg, the return journey to be made by way of the lake route.

Mr. A. C. Jenking, Montreal, is visiting the trade this week in Ontario, in the interests of the different firms which he represents. Among these are the Smith & Hemenway Co., and the Utica Drop Forge & Tool Co.

Mr. J. A. Henderson returned to Montreal last week after an extended business trip to London and other English trade centres. He has secured several good agencies in metals and hardware and has opened an office in the Board of Trade building. Mr. Henderson was formerly connected with Henry Rogers, Sons & Co., of Montreal, and is favorably known among the trade.

On Saturday last a pleasant and interesting event took place at Lewis Bros., Montreal, when Miss M. J. Irving, who was leaving after having been with the firm for four years, received an agreeable surprise. The occasion of the departure was her approaching marriage on Oct. 19, to Mr. Arthur Richards. In his usual happy manner Capt. Strange made a presentation address on behalf of the firm, the travelers and her fellow employes, who presented Miss Irving with a handsome china cabinet.

HIGH WORK

For painting or tinning **Steeple**s, or other very high work, we furnish ladders to order on short notice. We have made them as long as 92 feet, thoroughly strong and reliable, and can make them longer if desired. A ladder like this is **cheaper than a scaffold and safer**. Do not think it too much to buy one for one job: if it be known that you are equipped for high work you will get any jobs of that kind in your neighborhood and at **your own price**. We have just supplied a 64-ft. W. E. Ladder in two sections to a firm of painters in this city, and they are highly pleased with it. We shall probably put a detachable third section 20 feet long to it, and perhaps a shorter one to that. The joints will be all steel clad and the sides steel wired, and the whole will still be absolutely strong and safe.

We make **Extension Ladders in all lengths**, from 20, 24, 28, 32, 36 ft., and so on as high as you like. Write us for quotations.

The Waggoner Ladder Company, Limited, London, Ont.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Oct. 7, 1904.

SOME importers of linseed oil have experienced considerable annoyance lately at the working of the dumping tariff, on oil bought earlier in the season which has since advanced. They paid not only the regular duty, but a dumping duty as well, which not only put them out of the running for selling it at a profit, but placed them in a position to lose on recent consignments. No noticeable change has taken place in paints and oils since last week. Business continues steady with little increase. The demand for putty continues very strong and inquiries for white lead show a marked improvement.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1, 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Turpentine—Single barrels, 81 1-2c per gallon; two to four barrels, 80 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs. The above prices are net 30 days; for longer terms prices are higher. The market is firm.

Linseed Oil—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure White, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8-3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Oct. 6, 1904.

A N excellent demand for all lines, notably white lead, oil, varnishes, dry colors, putty, whiting, etc., is reported. Both in Toronto and throughout the country the use of paints continues well above the average. Prices are steady, with an upward tendency in whiting and some ochres and oxides, on which Winter rates for ocean freights will soon be changed.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c

per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 to \$2.62 1-2 per gallon, No. 1 \$2.50, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-



Good News and Bad News Travel Rapidly

Is it good or bad news that is in circulation about the paint you handle? You need have no fear if you sell HOLLYWOOD, for it would be impossible to improve on the good words that are said about it by painters and consumers in general.

HOLLYWOOD PASTE,

Ready Mixed and Floor Paints.

They wear on the job, not off it.

WRITE US FOR PARTICULARS.

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED.



A Good Firm to deal with.

Our Customers are good enough to express their satisfaction with our firm both in the matter of goods supplied and the treatment they get.

This week we mention

BRISTOL BARN AND ROOF PAINT

Specially prepared for painting Barns, Outbuildings, Roofs, Fences, Sheds, Bridges, Mills, Tanks, Iron Work, etc. Has always given satisfaction.

bbls., ½ bbls., 5 & 10 gal. kits, gals., ½ gals., qts. Send for prices.

STANDARD PAINT & VARNISH CO., LIMITED, WINDSOR, ONT.

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

ABOUT GLUES

What kinds do you handle? Are you and your customers satisfied? Perhaps we can give you a better article at a fairer figure. Our SCOTCH GLUES will be found of exceptional strength, and equal to many glues for which much higher prices are charged. Let us send samples.

GROVE CHEMICAL CO. Ltd, Appley Bridge, Lancashire, Eng.

TRADE WITH ENGLAND

Every Canadian who wishes to trade successfully with the Old Country should read

"Commercial Intelligence"

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$4.80.) Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO MONTREAL LONDON
OTTAWA WINNIPEG.

Aluminum Paint

Sell this paint for stove pipes, radiators and all iron work subjected to great heat. You can recommend the

"Island City"
Brand.

"Island City" Paints



make profits for the dealer.

Gold Paint

The "Island City" brand will not discolor or turn black. Now is the time to push it for decorative purposes. Women want it for mouldings and picture frames.

Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Window Glass.

MONTREAL.

No glass is being manufactured in Belgium at present and as this is the source of most of the glass sold in Canada, the price promises to be much higher in the near future. Belgian quotations are very high and many Canadian importers are getting anxious as to whether they will receive the stock for which they contracted earlier in the season. Our quotations are as follows: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount for diamond glass is 25 per cent. and for double thick, 40 per cent. Diamond star or double thick, first break, 50 feet, \$2.30; second do., \$2.50;

chases from one another. The result has been a decision by the local jobbers to discontinue giving the discount which has been quoted for some time, so that prices are now net. We quote: Star, first break, \$3.80 per 100 feet; double diamond, first break, \$5.06 per 100 feet, net f.o.b. Toronto.

An Ornamental Glass Display.

It would be hard to gather together for display at an exhibition a more pleasing exhibit of ornamental glass than that made by the Hobbs Mfg. Co., Limited, London, Ont., at the London Exhibition. The beauty and strength of the display is well shown by the accompanying illustration.

A Window Glass Famine.

What threatens to be the most serious situation in window glass known in Ontario for several years now seems imminent. At the present time stocks now in the hands of the jobbers are below the average in quantity. The large shipments usually received before the close of navigation have not arrived, nor is there much probability of their doing so. This is the result of the strike among the Belgian window glass workers, which has been in effect to a greater or less extent throughout the whole of the past Summer, but on the first of September owing to a complete lock-out of their workmen by the Belgian window glass manufacturers, there is little hope of any shipments of glass in fair quantities arriving in Canada this year. There are at the present time in Belgium only one or two furnaces in operation.

The immediate result of this serious state of affairs is that the Belgian prices have advanced very considerably and the few manufacturers with stocks in warehouse can command almost their own figures.

One result of these unusual conditions in Belgium has been a steady advance in the prices quoted in England and other manufacturing centres. In Ontario where the large proportion of the trade always goes to Belgium, the situation is particularly embarrassing because of the meagreness of stocks carried here. As a consequence the wholesale dealers of Toronto have put up prices, by doing away with the discount, which has been from 15 to 20 per cent. for some weeks.

Get in Your Whiting.

The shrewd retailer will be looking after his stock of whiting, ochres, oxides and other lines which bear a heavy charge for ocean freights in proportion to their first cost. The ocean freight Winter rates go into effect next week and prices are likely to stiffen as a consequence.



Exhibit of Hobbs Mfg. Co., Limited, London, Ont.

Castor Oil—English, in cases, 7 1-2c per lb and 8 1-2c for single tins.

St. John, N.B.

Burning oil has shown no change in price since the change of duty. Present price is not, however, low. A large Fall business has been done. Dealers are now busy making shipments of orders previously taken as well as looking after new business. Lubricating and paint oils show but a limited demand. Prices are firm. Receipts of coal oil have not been large. Prices are rather easier. Some oil is being carried over.

first break, 100 feet, \$4.40; second do., \$4.90; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

A serious condition of affairs has arisen in the market here as a result of the lockout in Belgium. There is general scarcity and the jobbers are already sorting up their stocks by pur-

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.



JACK-OF-ALL-TRADES

Really, when one reads over the
multitude of uses to which

GILLETT'S LYE

can be put, it does seem to be a
veritable Jack-of-all-Trades.

Gillett's Lye is an excellent article for the
hardware dealer.

E. W. GILLETT COMPANY LIMITED
TORONTO

"Silverware

that sells."



October is a good month

in which to provide yourself with a stock
of Silverware.

Fall Weddings and Christmas

cause a brisk demand for silverware.
No need to buy more than you can
reasonably expect to sell; no need,
either, to buy pieces too high priced to
sell readily.

The main things are Quality and
Design. Quality—the very highest qual-
ity—is assured if your silverware bears
this mark

MANFD AND
GUARANTEED BY



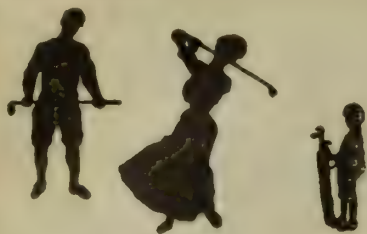
And as for Design, the very newest and
best are always found in **Standard
Silverware.**

We shall be glad to send our large
and attractive catalogue to any hardware
dealer requesting it. It is free. Send
for it to-day.

STANDARD SILVER CO.

LIMITED

HAYTER STREET, TORONTO.



GOLF!

A HARD STRAIGHT HIT

will surmount many difficulties and land the ball on the green. In business management, a bold policy has the same result. Throw away care and worry over a multiplicity of accounts and pin your faith absolutely and solely to the manufactures of

THE CANADA PAINT COMPANY LIMITED

Everything for the

PAINTER DECORATOR AND FINISHER!

**THE
CANADA
PAINT
COMPANY
LTD**

A SELF-CENTREING PIPE.

AN invention that has won general approval in Great Britain and other European countries, and which seems likely to be as generally popular on this side of the Atlantic, is being shown to architects and drain pipe manufacturers of Canada. This is a new and improved self-centreing sanitary drain pipe, invented and patented in England and abroad by Mr. M. H. Rylatt, Old Leake, Boston, and manufactured in England by Mr. H. R. Mansfield, M. P. for the Spalding Division. It has received special honors at the International Exhibition of Inventions, held at Brighton, Eng., where it was exhibited. Besides being awarded a diploma of merit, the chairman of the jurors, Col. Gourand, himself an eminent authority on drainage, has written a strong letter of commendation to Mr. Mansfield, stating that he will be pleased to personally bear the cost of a special gold medal in practical appreciation of this useful invention.

The good points of the pipe are described by the patentee as follows: (a) Perfect alignment when laid. By the aid of small tapered bars, which are made in the socket, the spigot of the pipe is helped into position, giving perfect alignment and a rigid joint. (b) No skilled labor is required for making the joint, as the pipe automatically goes into position and cannot be laid out of position. (c) Great saving in cost as compared with other patent joint pipes, the price being only slightly higher than that of a best ordinary socket pipe. It is an exceedingly simple and effective joint, and it has been very favorably received by the principal engineers and surveyors throughout the Kingdom.

Mr. Rylatt is at present in Canada for the purpose of negotiating the sale of the right for manufacturing this pipe in Canada.

IMPROVE THE FURNACE TRADE.

Editor Hardware and Metal:

Dear Sir,—Your article in the September 10 issue of Hardware and Metal on selling and improving of furnaces has been in my mind ever since I read it. In many respects it is quite true that there are too many dealers who are willing to sell furnaces at cut prices. If Smith estimates a job at \$100 Jones offers to do it for \$90, and immediately hunts around for a cheap furnace that will enable him to meet this figure. Some of the manufacturers are always ready to make goods, to meet this trade.

I always read with great interest the advertisements of any furnace manufacturers in your trade paper. To read

some of them, one who has any knowledge of the heating business is put in mind of a patent medicine booklet, for to read them one would think that all one had to do was to use the heater advertised and your customers will be warm ever after and have no coal bills to pay. With the majority of the trade these advertisers would do better if, instead of claiming such marvelous powers for their furnaces, they would give clearly the advantages of their furnaces. The trade could not help being influenced by such advertisements, as there are so many furnaces on the market to-day that the trade take a great interest in the respective merits of them all.

One must confess, however, that there are many in the trade who do not think much. Our old friend Barnum said: "The people like to be fooled," and after traveling through Ontario for six years I am convinced there are a great many "suckers" to be found throughout the province, and after they have been "bitten" the local dealer has to stand the brunt of all their complaints.

On looking over a furnace job not one hundred miles from Toronto recently I found it has been laid out fairly well, but in order to sell the job the representative had promised large registers and had, in fact, put in 12x15 in. ones. These should be connected by a 12 in. pipe, but to my surprise when I went into the cellar I found 8 in. pipe instead of 12 in. To carry out the plan he had a 20x24 flue and 10 in. cold air pipe from this. To get the job he accepted a 4x9 chimney and yet guaranteed to heat the house. This, of course, has never been done and never could have been done. One can make reasonable allowances for a firm just starting in the furnace business making mistakes, yet one cannot help thinking that a firm who would promise this should keep out of the furnace business or else let some one who understands the work lay out their job for them, as any furnace manufacturer would readily agree to do. This class of work has done more than anything else to hurt the business of one warm air heating firm, and should be avoided both by manufacturers and retailers. The policy adopted by both should be to find out how they can heat the house to best advantage rather than how cheap it can be heated. If this were done there would be less trouble and grumbling.

Thanking you for your valuable space, I am,

A READER.

October 1, 1904.

**CUSTOMS BROKERS,
FORWARDING and DISTRIBUTING AGENTS,
FREE AND BONDED STORAGE**

TURNBULL & HENDERSON, Vancouver, B.C.

**Cooper's Improved Patent
One-Piece Stovepipe Elbows.**



The Heaviest and Best Elbow on the market. Measures 23 inches long at the back. Send in for sample dozen. Polished or Common.

E. T. WRIGHT & CO.

Manufacturers and Sole Patentees,
Hamilton and Montreal.

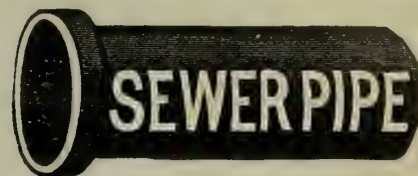
Don't Forget the Name...
**NEWMAN'S INVINCIBLE
FLOOR SPRINGS**

Strong, Quick, Reliable, Effective.
Will close a door against any pressure of wind.
Far ahead of ordinary door springs, pneumatic or otherwise. Ask your wholesaler.
W. NEWMAN & SONS, Birmingham.

**WORK AND
PRICES
RIGHT**
GALVANIZING ONT. WIND
ENGINE & PUMP CO.,
TORONTO, ONT. LIMITED.

FULL STOCK

Salt Glazed Vitrified



Double Strength Culvert Pipe
a Specialty.

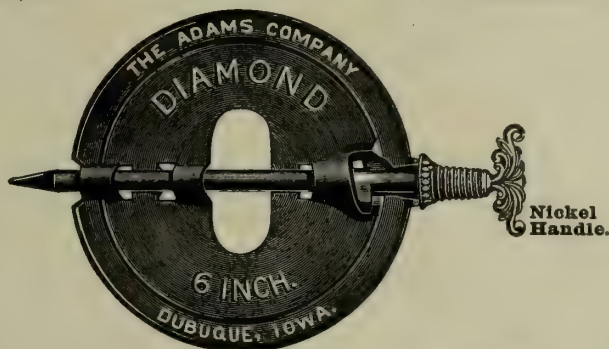
THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

DIAMOND STOVE PIPE DAMPER.

U.S. Patent June 25th, 1895

Canadian Patent December 14th, 1893.



Nickel
Handle.

Made by
THE ADAMS COMPANY, Dubuque, Iowa, U.S.A. TAYLOR-FORBES CO., Limited, Guelph, Ont

**Something New
in Curtain Loopers**

Best Brass Wire with Copper Mount.
Assorted Designs. 8 inch long. 1 PAIR ON A CARD.
J. NICKLIN & CO., Birmingham, England
Agent: F. P. ROGER, 30 Wellington St. W.,
Toronto.



NEW PATENT STABLE FIXTURES



**Galvanized
Steel Watering
Bowl
and
Steel U Bar
Stanchions.**

A profitable line for the trade. These fixtures are easily installed, are very durable, will not get out of order, and as they save one-third of the feed and are a great convenience, every progressive farmer will want them. The demand has already been created and the trade will find it in their interests to carry samples and equip themselves to install systems.

The Metal Shingle and Siding Co.

PRESTON, ONT.

LIMITED

Western Agency:
ELLIS & GROGAN,
CALGARY.

Manitoba Agency:
CLARE & BROCKEST,
WINNIPEG.

Montreal Agency:
J. B. DAGENAIS
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HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Oct. 7, 1904.

DEALERS in these lines are unusually busy at the present time. From the present until well on in November the season for plumbing supplies is at its height and in all lines considerable activity exists. Iron pipe is firmer and there is every likelihood of a scarcity. The mills are running over-

time to keep up with the demand, but as yet it is somewhat difficult to get supplies. Prices remain the same.

Range Boilers—Building operations are continuing and consequently a big demand exists for range boilers. Our quotations are as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—The market continues firm with a likelihood of an advance and business is brisk. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—The demand is unusually good. We quote: Light soil pipe, 3 to 6 inches, 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe Fittings—Prices on these have been cut for some time past, but now the market shows a somewhat firmer and more settled state and very little cutting is being done. We quote nominal prices. Discount on all sizes up to 6 inch 67 1-2 to 70 per cent.

Iron Pipe—The mills are running overtime to keep up with the demand. Prices are no longer being cut and with the prospect of a scarcity there is every indication of advanced prices. Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in.,

\$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—A firm lead market indicates firmness in this line, although prices have not been changed. Bar solder is quoted at 17 1-2c and wire at 18c.

Soldering Irons—There is no change in this market. Prices are as follows: 1 to 1 1-2 lbs, 37c per lb; 2 lbs. and over, 34c.

Ontario.

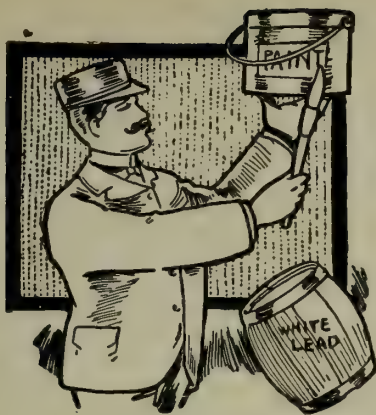
Office of HARDWARE AND METAL,
10 Front Street E.
Toronto, Oct. 7, 1904.

ALARGE volume of business is being done by all the plumbing supply houses. In the city the brisk demand which set in at the conclusion of the building laborers' strike still continues while the activity through the country is beyond the average. There have been a few changes in prices. The discount on patent, quick-opening valves has been increased to 70 per cent. from 65 per cent. The discount on headers is now 60 per cent. as against 55 per cent. last week. Nipples now carry a discount of 70 and 5 per cent. whereas last week it was 67 1-2 per cent. Cast iron bushings are now quoted.

Lead Pipe—A good trade continues at steady prices. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—An increase of 5 per cent. is noted in the discount on headers and nipples. Prices are steady. We quote nominally: Malleable fittings 20 per cent. for American and 35 per cent. for Canadian; cast iron (standard), 65 per cent.; headers, 60 per cent.; flanged unions, 60 per cent.;



It contains a dollar's worth for any man who wants to paint his roof or barn, and a portion of the dollar is left in your pocket.

Now, when reckoning day comes it's the portion left in your pocket that counts.

Ramsay's Rubber Roof Paint

is made to leave you a portion—a good portion. It sells for \$1.00 in gallon cans and carries conviction with it. It's a black paint and stays black. It outwears and outlasts any paint ever made for roofs, barns, bridges, fences, etc.

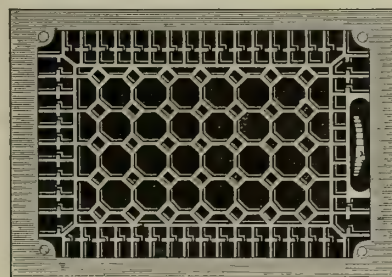
A. RAMSAY & SON COMPANY,

Established 1842.

MONTREAL.

Paint Makers.

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



The Standard Ideal Sanitary Co. Limited

MANUFACTURERS OF

Porcelain Enamel Bath Tubs Lavatories Sinks Slop Hoppers

"MADE IN CANADA."

Porcelain Enamel Bath Tubs,

Porcelain Enamel Sinks,

Porcelain Enamel Lavatories,

Porcelain Enamel Lipped and Plain Urinals,

Porcelain Enamel Slop Hoppers,

Porcelain Enamel Factory Wash Sinks.

THE ONLY MANUFACTURERS OF PLUMBING GOODS IN CANADA

Head Office and Factory:

Port Hope, Ont.

Sales Office:

50 Colborne St., Toronto.

malleable bushings. 57 1-2 per cent.; cast iron bushings. 70 per cent.; nipples up to 6 inch inclusive. 70 and 5 per cent.

Copper Range Boilers—A steady demand continues with the discount unchanged at 15 per cent.

A PIONEER PLUMBING GOODS MANUFACTURER.

MANKIND has learned to respect and to, in some measure at least, reward the man who has the courage of conviction and the strength of purpose to be a pioneer in any important branch of business, either commercial or industrial. It is recognized that as a rule the profits of business go to the man who decides for himself and thus leads while others follow.

Mr. H. T. Bush, president and manager of the Standard Ideal Sanitary Co., Port Hope, Ont., belongs to that type of man who naturally leads. This fact, coupled with his business career, seems to have naturally led up to his becoming the pioneer manufacturer of

Iron Pipe—Competition is not so keen as has been the case for some time, but there is still some cutting.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.

his parents, to Rome, N. Y., where, after leaving school, he entered a rolling mill to become a molder. During the time of his employment there he studied technical subjects in the evenings under a tutor. This study, combined with a large share of native ability, assured his advance to the position of pattern maker, and later to that of modeler in clay and then to that of draughtsman. The next step onward was his acceptance of a position as foreman of a large pattern department in one of the leading manufacturing plants in the United States. This position he held for seven years, at the end of which time he removed to Detroit, where he started in business as a designer and modeler, his

among plumbing goods manufacturers in the United States, as vice-president and executive officer.

During his connection with that company Mr. Bush established, in the face of much doubt and considerable opposition by his fellow directors, a branch of the Ideal Co. at Walkerville, Ont. This branch proved a success in every way and at the same time gave Mr. Bush a connection with the Canadian trade which, coupled with his wide experience in selling plumbing goods throughout Canada, suggested to him the possibilities of a plumbing goods manufacturing plant in Canada.

The result is now well known to our readers. Advantageous arrangements were made with Port Hope, and in March last year ground was broken and by September an up-to-date plant had been erected and was ready for operation. This plant has now been operated for more than a year with the result considerably beyond the expectations of the company, demonstrating the soundness of Mr. Bush's judgment and justifying the enterprise which induced him to start his Canadian business. Needless to say all Canadians are pleased to learn that the establishment of this new industry in Canada has proven a success and that its growth to large proportions is already assured.

Personally Mr. Bush is a thoroughly likable man. He has the strong views and ability to express himself of the man of affairs, and is withal genial and courteous to all. In addition to a thorough knowledge of the plumbing trade he is a close student of the principles of modern business and so his opinions win ready hearing and general approval.

Have Opened a Toronto Branch.

The Dominion Brass Works, Limited, Port Colborne, Ont., have opened a Toronto branch at 71 Adelaide street west, Toronto, where a full stock of their manufactures, including, in addition to the "Huxley" valve, a complete line of plumbers' brass goods, will be kept in stock. The trade are invited to send inquiries to the Toronto office, which will be under the charge of J. G. Stewart, a member of the company.

Are Now Canadian Agents.

The Ontario Lead & Wire Co., Toronto, have been appointed Canadian agents for the Glauber Mfg. Co., Cleveland, O., and will carry a stock of this firm's lines. They are also now carrying a full line of the Mueller Mfg. Co., Decatur, Ill., corporation work brass goods and other specialties.



MR. H. T. BUSH,
President of the Standard Ideal Sanitary Co., Port Hope.

porcelain enamel plumbing goods in Canada. In the first place he is a Canadian by birth, having been born near Prescott, Ont. In the second place he is American by training, and has been brought into full touch with the developments in the plumbing goods trade in that country, where sanitation has reached its highest point of development. At an early age he moved, with

company being known as the Excelsior Stove & Pattern Co.

During these years Mr. Bush came into close touch with all developments in pattern making and was personally acquainted with the leading manufacturers of plumbing goods throughout the United States. This company he left to enter the Ideal Mfg. Co., Detroit, recognized everywhere as among the leaders

HOME SANITATION.

By Ed. R. Pritchard, Secretary Chicago Department of Health.

THERE is no more effective factor in maintaining a low death rate in a city's population than that of proper sanitary conditions in its homes.

Physicians may cure disease, but perfect sanitary conditions prevent it. This means the lessening of human suffering and the lengthening of human life. With two objects of such paramount importance to be attained only through perfect sanitary conditions in the home, it becomes easy to understand why in all large cities of to-day there exists municipal control in this field of sanitary effort.

It is a field, too, in which there is a growing tendency to broaden the power of the municipality in the work of protecting human life and conserving the public health.

Take the matter of plumbing and drainage. There is no more insidious foe to health than sewer gases, due to defective traps and broken drains or catch basins. In the all-important matter of municipal supervision of all plumbing work, either new or repair of old, Chicago was one of the first cities in the Union to formulate and enforce a set of regulations based

upon strictly sanitary and scientific principles. That code has been adopted, or at least made a basis of those now in force in many towns and cities all over the country.

In rigidly enforcing the regulations of a code of this kind, there is nothing theoretical about the results that follow, any more than there is in those that are shown in the absence of such a code or in a failure to enforce its provisions when it does exist.

It has been shown by actual investigation, made by the division of the Chicago department of health, that in certain sections of the city, in nearly every case of scarlet fever or diphtheria, bad plumbing was found in the houses from which such cases were reported. The records of the department also show an alarming increase of infant mortality, including children under six years of age, in what are known as the river wards, as compared with that in the better resident districts, where the sanitary surroundings are practically all that could be desired.

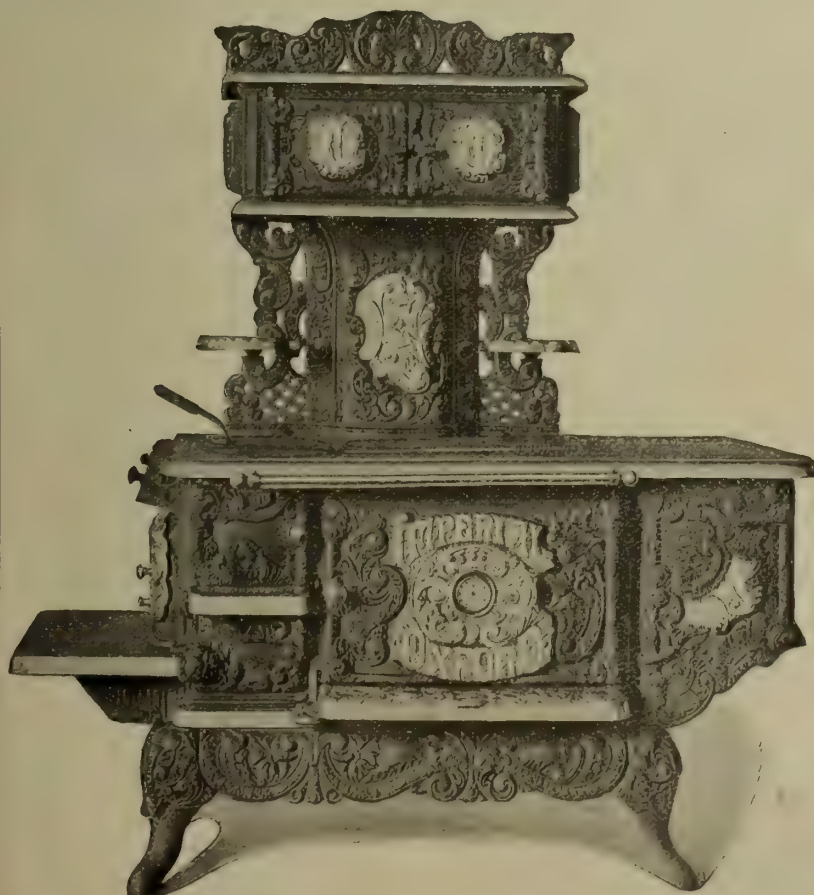
It will be conceded, I venture to say, that the presence in a community, in epidemic form, of what are known as the preventable diseases, indicates

pretty clearly that in some quarter there has been either criminal ignorance or negligence, or both. And the fact that this is so generally recognized may be taken as showing the importance of enforcing municipal regulations in sanitary matters.

There are, however, some phases of home sanitation which do not come under municipal control, but which are by no means unimportant agencies in promoting health and securing to the public comparative freedom from disease.

Under this head may be mentioned light and ventilation. At the present time we have both state and municipal laws regulating factories, stores and workshops as to providing air space and proper ventilation according to the number of occupants. The City of Chicago goes further, and insists upon adequate toilets and lavatories in all stores, shops and factories, together with a maintenance by employers of the best possible sanitary conditions.

Unfortunately, however, municipal regulations as to light, air and ventilation cannot well be enforced upon the careful housewives who darken their windows with heavy opaque shades and curtains, and who conscientiously refuse to admit the life-giving sunshine into their homes. These same housewives



THE Imperial Oxford Range

has reached the highest mechanical perfection in stove manufacture. It has more friends than any other stove on the market. Think of the free advertising it is getting from those friends in your locality. It would mean good business for you if you were our agent.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.

know that a plant, if put into a cellar where the sunshine is excluded, will shortly turn yellow and die. They should know that the same is true of a human being.

The sunshine is God's scavenger. Humanity should bask in it. Houses should be thrown open to its free admission; and all for the simple reason that disease germs cannot exist where sunlight has free and continued access. There is, however, the same need of popular education along these lines where municipal authorities are powerless to act, except as teachers, that there is among those who maintain untidy and unsanitary surroundings in violation of all sanitary laws.—Modern Sanitation.

An Improved Water Heater.

Messrs. D. Ross and J. K. Ferguson, of Vancouver, are the joint inventors of an improved water heater for general or domestic use, on which a Canadian patent has just been issued. The object of the inventors has been to design a light, compact water heater which will furnish an ample and continuous supply of hot water with a minimum expenditure of fuel, and to this end they suspend within the furnace of an air-tight heater of ordinary construction an annular water chamber, the sides of which are corrugated to afford an ample heating surface and give greater strength to the light copper, of which it is preferably made. The lower end of this water vessel may be connected to the water service and the hot water may either be drawn directly from a tap or be delivered from a reservoir. The whole forms a simple and efficient device, which Mr. Ferguson, who is a practical metal worker in this city, is prepared to place on the market at a reasonable cost.

Wire-Wound Wooden Pipe.

LAST April the Canadian Pipe Co. installed a plant here for the manufacture of wire-wound wooden pipe, since which time between thirty and forty carloads have been shipped from here to the Northwest Territories, Manitoba, and Vancouver Island, and other orders are on hand which will be filled within a very short time. It is claimed that this pipe is superior, for water-supply purposes, to iron pipe and can be furnished at less than half the price. Besides this, it is much lighter to handle and is not so liable to burst upon freezing as pipe made of iron. Large quantities of this pipe are being put into use by mill owners and mining engineers in lieu of flumes, as its use results in the saving of water and repair. This new industry seems to have

a good future before it.—L. Edwin Dudley, Consul, Vancouver, British Columbia, August 31, 1904.

Building Permits.

TORONTO.

Jessop & Sons, warehouse, 80 Bay street, \$23,000.

H. Hutson, dwellings, Nos. 66 and 68 Dewson street, \$5,000.

C. B. Niles, dwelling, near Crescent road on Rosedale road, \$7,000

Wm. H. Thomson, dwelling, No. 24 McPherson avenue, \$3,000.

Wm. Downs, dwellings, pair of semi-detached, No. 46 Huxley street, \$3,600.

Arthur Pinel brick dwelling, near Harbord street, on east side Euclid avenue, \$2,300.

W. O. McTaggart, two pairs dwellings, near Shanley street on Dovercourt road, \$6,000.

John H. Vivan, warehouse, near Robinson street, on east side Bellwoods avenue, \$3,200.

Very Rev. V. Marijon, brick boiler house, near Chapel street on St. Mary street, \$4,000.

Northrop, Lyman & Co., warehouse and office, Nos. 86 and 88 Richmond street west, \$15,000.

Canadian Kodak Co., factory, near Portland street, on north side King street west, \$40,000.

W. Littleford, pair semi-detached two storey dwellings, near Boulton street, on Jones avenue, \$1,650.

Gale Mfg. Co., warehouse and factory, southwest corner of Spadina avenue and Wellington street, \$30,000.

Trustees of Young street Mission, one storey mission, stone and brick, 381 and 383 Yonge street, \$12,000.

J. V. Hunter, semi-detached two storey dwellings, near Hepbourne street on east side Havelock street, \$7,000.

H. B. Johnston, factory, frame and galvanized corrugated iron, near Cornwall street, on Don Esplanade, \$6,000.

QUEBEC.

W. S. Peters, contractor, building on St. Peter and Sault au Matelot streets; G. N. W. Telegraph Co., proprietors; cost \$12,000.

Adj. Maranda, building on Taschereau avenue; cost \$1,800.

J. B. Jinchereau, contractor, building on Crown and Richardson streets; J. Falardeau, proprietor; cost \$3,500.

Building Notes.

Thomas Bros. are erecting several new houses at St. Thomas, Ont.

J. Cote has the contract for a \$30,000 Roman Catholic church at Alymer, Quebec.

T. D. Wannamaker, Brighton, Ont., has decided to build a new house. Herb. Stoneburg has the contract.

The corner stone for the Anglican church at Norwood, Ont., has been laid and the foundation completed.

Tenders for the erection of the Royal Victoria Museum, Ottawa, have been invited before October 24. The building is to cost \$500,000.

The new station at Elkhorn, Man., is being pushed ahead, and quite a change in the town's railway yards will shortly be effected.

D. Pottinger, general agent of the Intercolonial Railway, Moncton, N. B., is asking for tenders for new stations at Pictou and Antigonishe, N. S. Tenders must be in October 12.

A by-law has been passed at Rainy River, Ont., to issue debentures for \$3,500 for a town hall. Town Solicitor Morton, Rainy River, is building a handsome residence at a cost of \$2,000.

The Ogilvie Flour Mills Co. last week closed a contract with the Nordyke-Marmon Co., of Indianapolis, for the erection of a new 3,000 barrel flour mill at Fort William. The contract calls for the most up-to-date flour mill on the American continent.

W. H. McGillivray, of Ottawa, has the contract for the Dominion archives building, on Mackenzie ave., near the printing bureau. Plans for the Canadian branch of the royal mint, to be erected on the corner of Sussex and Cathcart streets, are now being prepared, and tenders will be called shortly.

Dr. J. H. C. Willoughby, of the Saskatoon, Phoenix Railway, of Saskatoon, has completed arrangements for funds for the construction of a \$250,000 steel bridge over the Saskatchewan River. The bridge will be 1,000 ft., with accommodation for both railway and general traffic.

A. E. Rea & Co., manufacturers and importers, Wellington street west, have bought the property at 97 Spadina avenue, corner of Spadina and Balsam. Rea & Co. want the site for warehouse purposes, and the contract for a five-storey brick building has already been given to the Woodruff-Robins Co., Limited, constructing engineers and architects. The structure will be erected at a cost of \$35,000.

A Hartney, Man., despatch says: "All the contractors and builders are now exceedingly busy in the town, and many new buildings are being constructed. Brookbank is erecting a new store and a public hall. A Fry is building a large furniture warehouse, and the manufacturing company is erecting several new buildings in connection with the planing mill. There are also four or five new houses in course of erection."

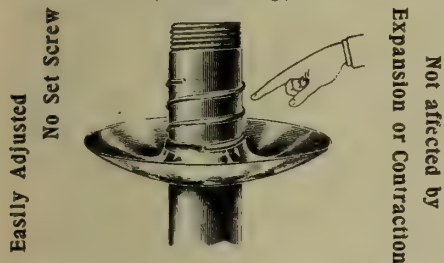
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tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will pay you.

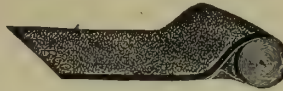
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CEILING and FLOOR PLATE**
(Patent Pending.)



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**A PERMANENT
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Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

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Room 215 Coristine Building, - **MONTREAL.**
Sole agents being appointed in each district. Write to-day.

When in want of

**Hayfork Pulleys,
Barn Door Hangers,
Jack Screws,**

**Mrs. Potts Irons,
Diamond Dampers,
Etc.**

Order from

The H. R. Ives Co., Ltd., - Montreal



RETURNE

JAN 16 1905

To Owner

Cut Book

Page 83

St.



New Process Oil Heaters.

Are absolutely safe.

Produce intense
heat without smoke.

Simple as a lamp in
construction.

**Light
and
Durable**

Founts are remov-
able for Cleaning
and Filling.

Provided with Bail
Handle with which
they can be easily
carried to any part
of the house.

The Thos. Davidson Mfg. Co., Limited

MONTREAL.

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No. 17—"Standard." Cheaper in quality,
but well proportioned and handsome in
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Japanese Pipe Varnish
Shino Stove Enamel.

Write for prices.

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Your Jobber

will supply it if you insist.

YORK METAL POLISH

(Liquid or Paste)

is ideal. Retail at 10c, 25c,
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Sample Tins Free on Request.

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Preparation for Cleaning Cutlery. 6d. and 1s. Canisters

JOHN OAKEY & SONS, LIMITED

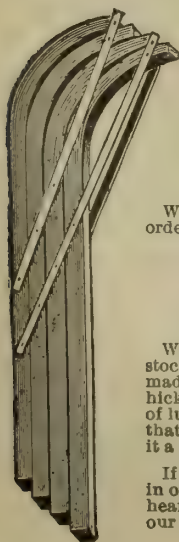
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Emery, Black Lead, Emery, Glass and
Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

JOHN FORMAN, 644 Craig Street
MONTREAL.



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Sarnia, Ontario

We are prepared to fill any
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**Heavy Waggon,
Sleigh,
Buggy, and
Cutter Stock**

We make a specialty of heavy
stock and can fill orders promptly
made from the best of oak and
hickory as we carry a large stock
of lumber and can make any sizes
that may be required. We make
it a point to fill orders promptly.

If you are in need of anything
in our line we will be pleased to
hear from you and we will give it
our prompt attention.

J. S. Loughhead & Son

Sarnia

Ontario

Bob Sleigh and
Long Runners

STOVES AND TINWARE.

Rolling Sheet Zinc.

THE manufacture of sheet zinc—to the average observer—would seem a comparatively simple task. Yet zinc, always treacherous and uncertain, requires careful handling in order that the sheets may be possessed of certain clearly defined qualifications. The operation is one requiring skilled help and constant watching, lest any one of a score of contingencies arise. Only the choicest of spelter—metallic zinc—can be used in its manufacture. With each melting of this peculiar metal it requires a hardness which ultimately would ruin the sheets for drawing, spinning or utilization in any save the most simple uses. In thickness its variations are graduated in thousandths parts of an inch, and a sheet which varies more than 0.002 inch is rejected by more exacting manufacturers. So one might relate other demands, but these are sufficient to give an idea of the exactness of each detailed step of production.

Once the selected slabs of spelter reach the zinc rolling mill they are (as demands require) fed into a huge melting pot which has a capacity of 15,000 to 35,000 pounds of molten, semi-fluid metal. From this pot the metal is withdrawn by the aid of huge ladles and poured into molds, usually 10 x 30 inches, and an ingot, or "billet" as it is generally known, is cast, having a thickness from one to three inches, depending upon the size and thickness of the sheet to be rolled. To be perfect, a billet must contain no blow holes or bubbles, free as possible from oxidation, and as nearly perfect on its surfaces as possible. Great care, therefore, is exercised in pouring the molten metal into the molds in order that none of these disadvantages may arise.

After the zinc has had time to cool in the molds, the billets are passed on to an oven in which they are annealed. Here the metal is softened by heating, the average temperature in the ovens being about 300 degrees Fahrenheit. Perfectly annealed, the metal will roll more easily and produce a more uniform sheet. Strange to say, a moderate change in the temperature of the annealing oven will cause a variation in

the character of the sheet produced from the annealed metal. This peculiarity or its cause is a subject little understood by the average consumer of sheet zinc, and were he to take advantage of this fact he could frequently secure sheets more perfectly adapted to his particular business by advising the rolling mill of the particular use to which he intends putting the sheets. They would then be made accordingly.

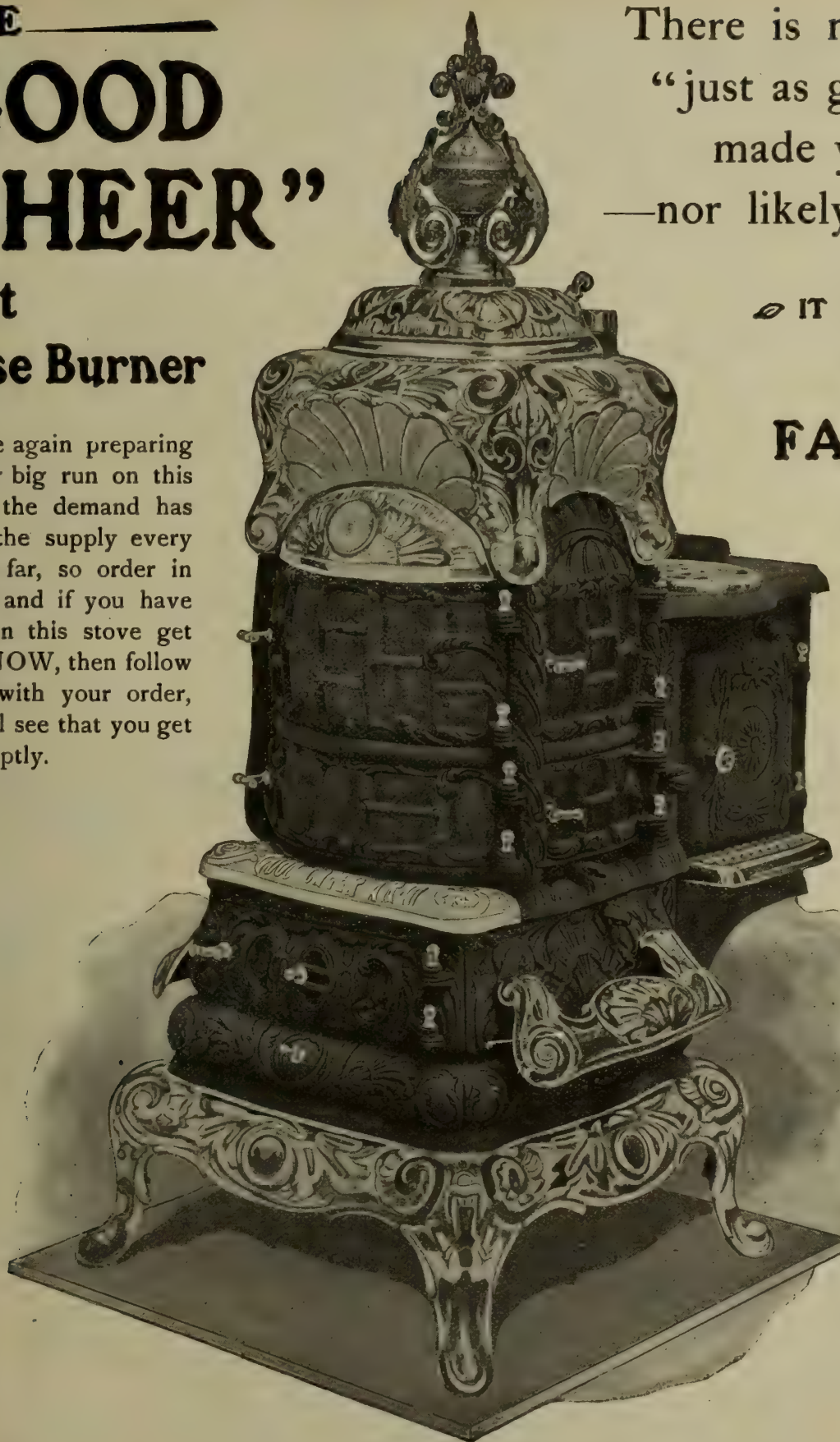
From the annealing oven the billets go direct to the first or roughing rolls being handled en route by a workman armed with a large pair of tongs, so supported that the weight of the hot billet is sustained by overhead travelers. The workman, therefore, merely guides the billet in its passage to cast iron runways, on which they rest until needed by the roller, who seizes the billet with a pair of tongs and, after freeing its surface from loose scraps of metal, forces it down the runway to where the two huge rolls are awaiting it. The billet is forced through the space between the rolls, a second billet follows almost instantly, and ere the first billet just freed by the rolls has been lifted by tongs automatically raised, the second billet has fallen upon the slides. After each pair of billets has passed through the roughing rolls the space between the rolls is reduced by tension, and each pass through the rolls finds the billet decreasing in thickness and increasing in width and length.

The greatest increase in the size of the sheet comes in the length. Here is produced an interesting phenomenon. The change of the positions of the crystals of zinc—the molecular expansion—results in the formation of a "grain," which must constantly be taken into consideration in working the sheet in the factory. When the billet has been reduced to about 1-8 inch in thickness and increased in size from 30x10 inches to 34x84 or 120 inches (according to the thickness of the billet), it is an odd looking sheet of metal. Each end of the long sheet is wavy, its edges serrated and uneven. The sheet is then sent to power shears—great knives which clip off the edges of the sheets of metal with as much ease as though they were paper.

THE "GOOD CHEER"

Art Base Burner

We are again preparing for another big run on this stove, but the demand has exceeded the supply every season so far, so order in good time, and if you have not yet seen this stove get a sample NOW, then follow up quick with your order, and we will see that you get them promptly.



There is nothing
"just as good"
made yet
—nor likely to be.

IT HAS
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FAULTS**

Firepot removable
without turning a
single bolt.

Has Duplex Grate
and large ash pan.

Every stove a
Double Heater.

Has Steel Oven.

With or without
oven.

The JAMES STEWART MFG. CO., Limited
Woodstock, Ont. and Winnipeg, Man.

The sheets are cut in half and are passed to a second annealing oven. There they are again subjected to a temperature of from 350 degrees to 400 degrees for a period of about two hours, gathered into packs, consisting of 18 or 20 sheets, and in these "packs" sent to the finishing rolls.

The finer and more delicate step of the process is the finishing. The rolls here used are of the same general character and size as the roughing rolls, but do their work less rapidly. A pack of sheets is divided in half, and five or six passes through the rolls is generally sufficient to have reduced the sheet to 0.025 inch. As the pack being "run on" decreases in thickness, more pressure is put on the rolls, and the sheets change in hue from a dull bluish-gray to a bright lustre, which is produced not by pressure or polishing device but by the friction of one sheet against another.

From the finishing rolls the sheets are laid upon trucks and wheeled to a second

power shear, which trims ten feet of margin almost instantly. After the sheet has been trimmed and made true, it is inspected for flaws. Any imperfection in surface causes the sheet to be cast aside as useless for the general trade. As one sheet after another meets the inspection it is rolled over on to another truck which stands on a scale. When the accumulated sheets aggregate about 600 pounds they are moved off the scale and passed on to packers.

The packers roll the sheet zinc up and drop it into a cask or cylinder of Russia iron into which a wooden bottom has been inserted. When the cask has been filled another wooden circle is put into the upper end. Then the edges of the iron cylinder are bent over and nailed down and the cask is ready for labeling and shipment. The labeling is simple, being designed to show the brand and gauge of the metal, the number of pounds in the cask and the size of the sheets.

From the packing room or department the casks may be sent direct to the cars for shipment or to the storeroom.

A portion of the sheet product is shipped flat in piles carefully blocked in either end of the car. Users who carry on a regular manufacture of articles from sheet zinc usually prefer their shipments packed "flat" rather than in the casks.

Work Resumed.

In conversation with Hardware and Metal early in the week Walter Grose, Montreal, principal shareholder in the Ontario Lantern and Lamp Co., stated that manufacturing has been resumed at Hamilton in the lantern and lamp burner departments. The fire losses have been promptly settled by the insurance companies and repairs to the factory are rapidly being effected. The Ontario Lantern and Lamp Co. expect in the near future to be able to fill all their orders for staple goods.

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The Range that Never Fails.

In the SELECTION OF MATERIALS and in PROCESS OF MANUFACTURE of the GRAND IDEA RANGE, we have one object in view at all times, that of producing a Range as near perfect as it is possible to construct it. SUPERIOR FLUE ARRANGEMENT and FIRST-CLASS MOUNTING put this Range in the FRONT RANK for QUICK, EVEN BAKING and ECONOMY IN THE CONSUMPTION OF FUEL.

GRAND IDEA RANGES are EASY SELLERS because of their up-to-date design and good nickel.

THE SATISFACTORY RESULTS which GRAND IDEA RANGES will give your customers will assist you in the sale of many other Ranges of this make in your territory.

If you are interested in this Range, let us hear from you and we shall be pleased to send you descriptive literature.

GUELPH FOUNDRY CO.
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Guelph, Ont.

Western Representatives:

Messrs. E. G. LOW & CO.,
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Art Book 25
J. M. 40

"LOOK FOR THE BOY" EVERY ROLL

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REX FLINTKOTE ROOFING

and if you would become acquainted with it you would be as enthusiastic about its good qualities as we, and use it in preference to shingles, tar, tin, gravel, or any other roofing. It is fast superseding all of these, as it costs less, lasts longer, and has none of their faults or defects. It is made of the best matted wool fibre treated by our own compounds, and is waterproof and fire-resisting. We will send free samples and our handsome illustrated book on receipt of your name.

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Gives the Light of 100 Candles and Costs Less Than Coal Oil.

No smoke or smell. The whitest, clearest, softest light for reading or sewing. The different styles are suitable for store, church or home. **SATISFACTION GUARANTEED. Catalog on Request.**

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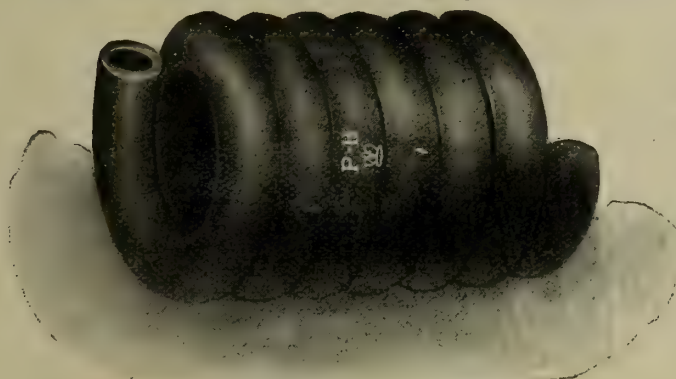
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Hardware and Machinery.

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Butler's Famous Cutlery AND Electro-plate.





Sole Makers of Butler's "KEEN" Razors, the "Cavendish" Brand of Table Knives, Carvers, and Plate (Regd.).

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By Buying Imitation FIRE, Water, Dust and
Air-Proof SKYLIGHTS. **BUY THE
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Manufacturers and Contractors
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Cornices, Metal Ceilings, Sidings and all
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EIGHT GREAT SECRETS OF SUCCESS.

A MAN with a mania for answering
advertisements has had some in-
teresting experiences. He learned
that by sending \$1 to a Yankee he could
get a cure for drunkenness. And he did.
It was to "take the pledge and keep it".

Then he sent fifty cents to find out how
to raise turnips successfully. He found out:
"Just take hold of the tops and lift."

Being young he wished to marry, and
sent thirty-four one-cent stamps to a
Chicago firm for information as to how to
make an impression. When the answer
came it read, "Sit down on a pan of dough"

Next advertisement he answered read
"How to double your money in six
months." He was told to convert his
money into bills, fold them, and thus
double his money. Next he sent for twelve
useful household articles and got a package
of needles.

He was slow to learn, so he sent \$1 to
find out "how to get rich." "Work hard
and never spend a cent." That stopped
him.

But his brother wrote to find out how to
write without pen and ink. He was told to
use a lead-pencil.

He paid \$1 to learn how to live without
work, and was told on a postal card:
"Fish for easy marks as we do."

BRITISH SHIPPING.

FROM the annual statement of the
navigation and shipping of the
United Kingdom for the year 1903,
just presented to Parliament, it appears
that last year 205,586 vessels of 41,-
762,424 tons arrived at and 203,389 ves-
sels of 40,229,456 tons sailed from Eng-
lish ports in the coasting trade, against
209,516 vessels of 42,436,809 tons ar-
rived and 207,361 vessels of 40,699,517
tons sailed in the previous twelve
months.

In the foreign trade there was also a
decrease, 8,429 vessels of 2,735,168 tons
having entered and 8,493 vessels of 2,-
777,898 tons having cleared from Eng-
lish ports for foreign ports in 1902,
while last year 8,082 vessels of 2,217,-
472 tons entered and 7,608 vessels of 2,-
237,745 tons cleared.

NEW AGENCY.

Walter Grose, Montreal, has been ap-
pointed selling agent in Canada for the
Black Diamond File Works, G. & L.
Barnett Co., Philadelphia. As the
trade are aware, there has been consid-
erable delay during the last two or
three years in filling orders for this
brand of files, but extensive changes
have been made in the plant and the
management anticipate no further diffi-
culty.

Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Phillip D. Johnston; 65 full-page
plates and 2 folding plates, with full text
and 134 illustrations; cloth.....\$2.00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire build-
ings for bells, alarms, annunciators, and
gas lighting from batteries. 55 pages,
illustrated; paper, 25c.; cloth..... 50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum
at all discounts; cloth, \$3.00; double
indexed\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing
and Printing Frame, Preparing the Paper
and Making Prints of Various Kinds.
28 pages 25c.

Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for
mixing and using cements. 96 pages....\$1.00

Metallurgy of Cast Iron.

By Thos. D. West. Showing processes
involved in its treatment, chemically and
physically, from the blast furnace,
through the foundry, to the testing
machine. 627 pages, 153 illustrations....\$3.00

Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and
zinc; also tinning gray iron castings....\$2.00

Practical Plating and Polishing.

Best and Most Approved Methods of
Preparing and Cleaning all Metals for
Electro-Plating and Polishing. 114 pages,
illustrated 80c.

New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as
applied to all branches of sheet metal
work, 430 pages, 744 illustrations.....\$5.00

Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams,
tables, 123 pages, 53 figures\$1.00

Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing,
cornice shop practice and skylight con-
struction, 175 pages, 170 illustrations and
13 plates\$1.50

Furnace Heating.

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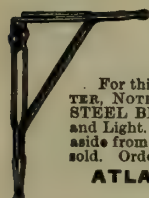
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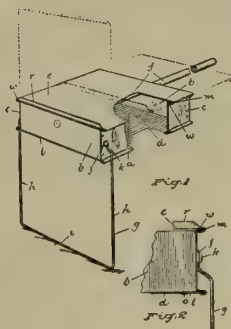


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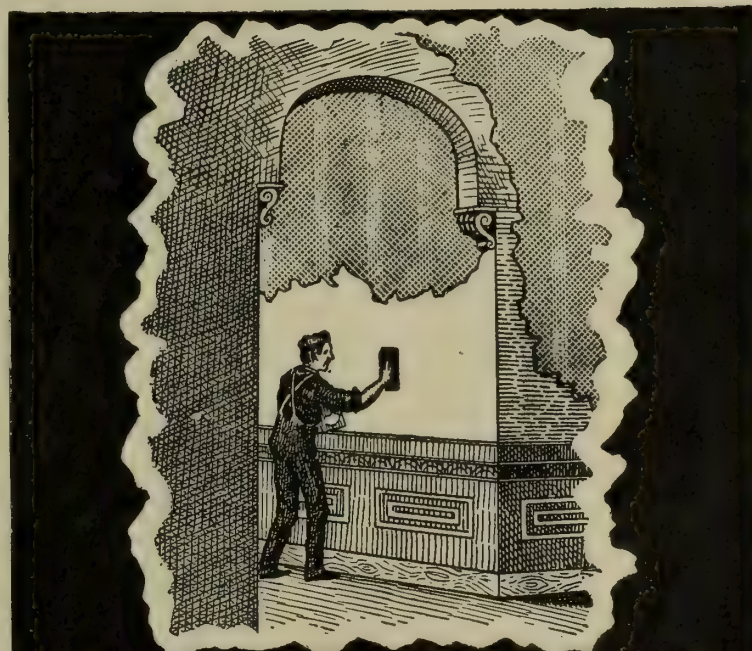
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On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.

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(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

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Ready Roofing, Sheathing and Black Diamond Tarred Felts, Building Papers, Fibre and Manilla Wrappings, etc., are unexcelled.

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82 MCGILL STREET,

MONTREAL

CURRENT MARKET QUOTATIONS.

Oct. 7, 1904.

These prices are for such qualities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TIN PLATES.

Charcoal Plates—Bright. Per box.
I.C. usual sizes..... \$6 50
I X..... 8 00
I X X..... 9 50
Famous, equal to Bradley—
I C..... 6 75
I X..... 8 25
I X X..... 9 75
Raven and Vulture Grades—
I C, usual sizes..... 4 25
I X..... 5 00
I X X..... 5 75
I X X X..... 6 50

"Dominion Crown Best"—Double Coated, Tinsued. Per box.

I C..... 5 50
I X..... 6 50
I X X..... 7 50
Allaway's Best—Standard Quality.
I C..... 4 50
I X..... 5 50
I X X..... 6 50

Coke Plates—Bright.

Bessemer Steel—
I.C., usual size, 14x20..... 3 35
I.C., special sizes, base..... 3 60
20x28..... 7 10

Charcoal Plates—Terné

Dean or J. G. Grade—
I.C., 20x28, 112 sheets..... 7 50
I X, Terné Tin..... 10 50

Charcoal Tin Boiler Plates.

Cookley Grade—
X X, 14x56, 50 sheet bxs. }
14x60, }
14x65, } 7 00
Tinned Sheets.
72x30 up to 24 gauge..... 7 25
26..... 7 75

IRON AND STEEL.

Common bar, per 100 lb..... 1 80
Refrined..... 2 20
Horsehoe Iron..... 2 25
Hoop steel, 1 1/2 to 3-in. base..... 2 75
Sleigh shoe steel..... 2 30
Tire steel..... 2 50
T. Firth & Co.'s tool steel, per lb 0 12 1/2
B. K. Morton & Co.—
"Alpha" tool steel..... 0 70
"M" Self-Hardening..... 0 60
"I" Standard..... 0 14
Cases high speed steel..... 0 60
"standard tool steel..... 0 14
"crucible sheet steel..... 0 14
Chas. Leonard's tool..... 0 08
Crucible Steel Co.
"Black Diamond..... 0 10
"Silversteel..... 0 13
"Special..... 0 17
"Rex high speed steel..... 0 65
"Self Hardening..... 0 45
Sanderson's Crucible Tool..... 0 09
"Superior..... 0 12
"Extra And..... 0 15
"Self Hardening..... 0 50
"Rex high speed..... 0 65
Jonas & Colver's tool steel..... 0 10
"Air Hardening..... 0 70
Drill steel, per lb..... 0 08

BABBIT METAL.

"Tandem," A..... per lb. 0 27
"B..... 0 21
"C..... 0 11 1/2
Frictionless Metal..... 0 23

Syracuse Smelting Works:

Aluminum, genuine..... 0 45
Government, "..... 0 44
Tough, "..... 0 40
Hard, "..... 0 40
Dynamo..... 0 30
Special..... 0 25
Harmony..... 0 22
Car Box..... 0 20
Extra..... 0 15

The Canada Metal Co.:

Imperial, genuine..... 0 40
Metallic..... 0 30
Hercules..... 0 28
Star..... 0 15
No. 1..... 0 12
No. 2..... 0 10
No. 3..... 0 06
No. 4..... 0 05

Geo. Langwell & Son.

No. 1..... 0 08
No. 2..... 0 07
No. 3..... 0 05 1/2
Extra..... 0 09 1/2

BLACK SHEETS.

Montreal Toronto
10 and 16 gauge..... 2 25 2 50
18 gauge..... 2 30 2 50
20..... 2 30 2 50
22 to 24 gauge..... 2 35 2 70
26..... 2 40 2 80
28..... 2 40 2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary..... 2 50
All bright..... 3 50
Galvanized Canada Plates—
Ordinary..... Dom.
Crown.

18x24x52..... 4 25 4 35
" 60..... 4 50 4 60
20x28x80..... 8 50 8 70
" 94..... 9 00 9 20

GALVANIZED SHEETS.

Queen's
Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge..... 3 65
18 to 24 gauge..... 3 75 3 50 3 75 3 75
26..... 4 00 3 75 3 90 4 00
28..... 4 25 4 00 4 05 4 25
American brands, \$4.00 for 10 1/2 oz.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
Tie out chains..... 5 60
Stall fixtures..... 35 p.c.
Trace chain..... 45 p.c.
Jack chain, iron, single and double, discount 35 p.c.
Jack chain, brass, single and double, discount 40 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots..... 13 75
Bars.
Cut lengths, round, 1/2 to 3/4 in. 21 00 23 00
" round and square, 1 to 2 inches..... 21 00 23 00

Sheet.
Plain, 16 oz., 14x48 and 14x60..... 20 00
Plain, 14 oz..... 21 00
Tinned copper sheet..... 24 00
Planished..... 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 "..... 0 21
" 50-lb. and above "..... 0 20

BOILER AND T.K. FITTINGS.
Plain tinned, per lb..... 0 28
Spun, per lb..... 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4..... 0 23 1/2
Tubing, base, per lb..... 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb..... 6 00 6 25
Domestic..... 5 50 5 75

ZINC SHEET.

5-cwt. casks..... 6 15 6 50
Part casks..... 6 50 7 00

LEAD.

Imported Pig, per 100 lb..... 3 20 3 30
Bar, per lb..... 0 05
Sheets, 2 1/2 lb. sq. ft., by roll..... 0 06 1/2
Sheets, 3 to 6 lb..... 0 06

NOTE.—Cut sheets 1c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. list. f.o.b. Toronto.
NOTE.—Cut lengths, net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's..... per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck, seal and ball, \$7.50. Discount, 17 1/2 p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax. Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.
Zinc..... 6 00
Copper, discount 20 per cent. off revised list.

BATHS.

Standard Ideal Enameled.
5 1/2-ft. 2 1/2 in. rolled rim, 1st quality..... 21 25
" 2nd..... 17 25

CLOSETS.

Net.
Fittings..... 1 00
Plain Simplex Syphon Jet..... 9 00
Emb..... 9 50
Fittings..... 1 25
Low Down Elgin or Teutonic, plain..... 6 00
Low..... 6 50
Connection..... 1 25
Plain Richelieu..... 4 25
Emb..... 4 50
Connections..... 1 25
Basins, P.O., 14-in..... 0 63
Basins, oval, 17 x 14-in. Toronto..... 1 50
Basins, " 19 x 15-in..... 2 00

IRON PIPE.

Black pipe— Per 100 feet.
1/2 inch..... 1 97
"..... 2 15
"..... 2 28
"..... 2 86
1..... 4 10
1 1/2..... 5 62
2..... 6 72
2 1/2..... 8 98
3.....
3 1/2.....
4.....
4 1/2.....
5.....

Galvanized pipe—
1/2 inch..... 2 80
"..... 2 86
"..... 3 14
"..... 4 01
1..... 6 75
1 1/2..... 7 85
2..... 9 43
3..... 12 57

Malleable Fittings—Discount 20 p.c.
Cast Iron Fittings—
Standard, 57 1/2 per cent.; unions, 55 per cent.; on nipples, headers and flanged unions, 60 per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dis. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra discount 10 per cent.
Lever handle Stops and Waste, discount 60 per cent. With in lots of 2 dozen and over, an extra discount of 10 per cent.
J.M.T. Globe, Angle and Check Valves, discount 55 per cent.
Standard Globe, Angle and Check Valves, discount 65 per cent.
Kerr's special standard globes and angles, discount 60 per cent.
Kerr's Jenkin disc, copper-alloy disc and heavy standard valves, discount 60 per cent.
Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator valves, discount 70 per cent.
Kerr's Jenkin disc, copper-alloy disc radiator valves, discount 70 per cent.
Kerr's quick-opening hot-water radiator valves, discount 70 and 10 per cent.
Weber's (Kerr) patent straightway gate valves, brass, discount 55 per cent.
Weber's (Kerr) patent straightway gate valves, I.B.E.M., discount 70 per cent.
J. M. T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 65 per cent.
Patent Quick-Opening Valves, discount 70 per cent.
No. 1 compression bath cock..... net 1 75
No. 4..... " 1 90
No. 7 Fuller's..... " 2 10
No. 4 1/2..... " 2 25
Patent Compression Cushion, basin cock, hot and cold..... per doz. 15 00
Patent Compression Cushion, bath cock, No. 2208..... 2 25
Square head brass cocks, discount 55 per cent. " iron " 50 to 60 " 50
Thompson Smoke-test Machine \$25.00

RANGE BOILERS.

Copper, 30 gallon..... " 22 00
" 35..... " 24 00
" 40..... " 28 00
Discount off copper boilers 15 per cent.

SOLID PIPE AND FITTINGS.

Light soil pipe, discount, 50 per cent.
" fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60 per cent.
and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.

Per lb
Bar, half-and-half, guaranteed..... 0 18
Bar, half-and-half, commercial..... 0 17

WRENCHES.

Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 20 to 25 per cent.
Towers' Engineer..... each 2 00 7 00
" S..... per doz. 5 80 6 00
G. & K.'s Pipe..... 3 40
Burrell's Pipe..... each 1 00
Pocket..... per doz. 8 25 2 90

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is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coll. 1 to 11 in.	"	0 95 1 85
English	"	2 00 4 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.
Miller's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.
Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAUTROUGHS.

10-inch per 100 ft. 10 00

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35
Polished, 15c.	per dozen extra.	

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINN.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	70 and 10	per cent.
Arcade	70 " 10 "	"
Kearney & Foot	70 " 10 "	"
Diaston's	70 " 10 "	"
American	70 " 10 "	"
J. Barton Smith	70 " 10 "	"
McClellan	70 " 10 "	"
Eagle	70 " 10 "	"
Nicholson, 60 and 10 to 60, 10 and 5	"	"
Royal	80	"
Globe	70 to 75	"
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.	"	"
Jowitt's, English list, 25 to 27½ per cent.	"	"
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50	"	"

GLASS.

Window. Box Price.

Size United Inches.	Per 50 ft.	Star 100 ft.	D. Diamond Per 50 ft.	Per 100 ft.
Under 26	3 80		5 06	
26 to 40	4 00		5 44	
41 to 50	4 50		6 56	
51 to 60	4 75		7 50	
61 to 70	5 00		8 62	
71 to 80	5 30		9 38	
81 to 85			10 75	
86 to 90			12 30	
91 to 95			15 00	
96 to 100			18 00	
Discount 15 per cent				

GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each 1 65 2 40
GILLET'S POWDERED LYE.
1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.

HALTERS.

Rope, 1-inch	per gross	12 00
Rope, 1 to 1-inch	"	9 00
Rope, 1 to 1-inch	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1½	"	5 20
Web	"	2 45

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

Tack.

Magnetic per doz. 1 10 1 20

Sledge.

Canadian per lb. 0 07½ 0 08½

Ball Pean.

English and Canadian, per lb. 0 22 0 25

HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

Store door per doz. 1 00 1 50

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. 1 00 1 25

Plane.

American per gross 3 15 3 75

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

doz. pairs.

Steel barn door 8 00 10 00

Stearns, 4-inch 4 50

" 5-inch 6 00

Zenith 9 00

Lare's covered—

No. 11, 5-foot ran 8 40

No. 11½, 10-foot run 10 80

No. 12, 10-foot run 12 60

No. 14, 15-foot run 21 00

Steel, covered 4 00 11 00

" track, 1 x 3-16 in (100 ft) 3 75

" 1½ x 3-16 in (100 ft) 4 75

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

Shingle, Red Ridge 1, per doz. 4 40

" 2, " 4 85

Barrel, Underhill 5 00

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½

" 5-in., " 0 06½

" 6-in., " 0 06

" 8-in., " 0 05½

" 10-in., " 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. 4 50

12 in. up. 3 25

Spring, No. 20, per gro. pairs 10 50

Spring, Woodyatt pattern, per gro., No. 5, \$17.50; No. 10, \$18; No. 20, \$10.80; No. 120, \$20; No. 51, \$10; No. 50, \$27.50.

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter per doz. 4 00 4 50

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOES.

Cast Iron.

Bird cage per doz. 0 50 1 10

Clothes line, No. 61. " 0 00 0 70

Harness " 0 60 12 00

Hat and coat per gro. 1 10 10 00

Chandelier per doz. 0 50 1 00

Wrought Iron.

Wrought hooks and staples Canadian discount 60 per cent.

Wire.

Hat and coat, discount 60 per cent.

Belt per 1,000 0 60

Screw, bright, discount 60 per cent.

HOSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list { Oval head

"M" brand, 55, per cent. { head

Countersunk, 57½ per cent.

"Monarch" 50 and 7½ per cent.

"Peerless" 50 per cent. dis.

HORSESHOES.

F.O.B. Montreal

Iron Shoes.

Light, medium and heavy 3 65 3 90

Snow shoes 3 90 4 15

Steel Shoes.

XL, sizes 1 to 5 5 35

Light, No. 2 and larger 3 80

No. 1 and smaller 4 05

Featherweight, all sizes 0 to 4 5 35

Toeweight, all sizes 1 to 4 6 60

JAPANNED WARE.

50 per cent.

ICE PICKS.

Star per doz. 3 00 3 25

NETTLES.

Brass spun 7½ per cent. discount off new list.

Copper per lb. 0 30 0 50

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American per gross 0 60

KNOBS.

Door, japanned and N.P., per

doz. 1 50 2 50

Bronze, Berlin per doz. 2 75 3 25

Bronze, Genuine 6 00 9 00

Shutter, porcelain, F. & L.

per gross 1 30 2 00

White door knobs per doz. 2 00

HAY KNIVES.

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANTERNS.

Cold Blast " per doz. 7 00

No. 3, "Wright's" 8 50

Ordinary, with O. burner. " 4 00

Dashboard, cold blast. " 9 00

No. 0 " 5 75

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain lined per doz. 2 20 5 60

Galvanized " 1 87 3 85

King, wood " 2 75 2 90

King, glass " 4 00 4 50

All glass " 0 50 0 90

LINE'S.

Fish per gross 1 05 2 50

Chalk " 1 90 7 40

LAWN MOWERS FOR 1905.

Woodyatt, 10½-in., 14-in. cut \$ 8 50 to \$11 00

Star, " 9-in. " 6 00 to 6 50

Daisy, " 8-in. " 5 25 to 5 75

Philadelphia, 7½-in. " 6 00 to 7 50

Woodyatt, 10½-in., ball bearing 13 25 to 18 00

Grass Boxes " 1 75 to 2 00

King Edw'd, 12-in., 14-in. cut 9 00 to 10 00

Horse Lawn Mowers, "Special."

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel. 7 50 10 00

9-in. " 5 50 6 25

8-in. " 4 00 4 50

Discount 50 per cent.

LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin per doz.

Cabinet.

Eagle, discount 30 per cent.

Padlocks.

English and Am. per doz. 0 50 6 00

Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

MALLETS.

Tinsmiths' per doz. 1 25 1 50

Carpenters', hickory, " 1 25 3 75

Lignum Vitae " 3 85 5 00

Caulking, each " 0 60 3 00

MATTOCKS.

Canadian per doz. 5 50 6 00

MEAT CUTTERS.

American, discount 3½ per cent.

German, 15 per cen

Gem " each 1 15

MILK CAN TRIMMINGS.

Discount 25 per cent.

NAILS. Cut. Wire.

2d and 3d 3 30 3 45

3d 2 95 3 12

4 and 5d. 2 70 2 85

6 and 7d. 2 60 2 80

DO YOU NEED



A MAILING TABLE

Page 13

Strong, Durable, Beautiful

Just the desk for mailing purposes; made of selected oak, beautifully finished and cover of leather, with two drawers on each side for stamps, catalogs, etc. A full line of Office Furniture fittings (in steel and wood), and labor saving devices kept in stock. Write for further particulars and prices.

THE OFFICE SPECIALTY MFG. CO., LIMITED

No. 55 YONGE STREET

FACTORIES:
NEWMARKET.

New City Premises: 97-103 WELLINGTON ST. W.,

TORONTO.

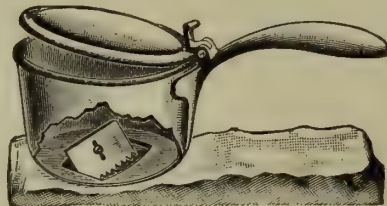
PLANE IRONS.			SAP SPOUTS.		
English	per doz.	2 00 5 00	Bronzed iron with hooks	per 1,000	7 50
PLIERS AND NIPPERS.			"Eureka" tinned steel, hooks ..		8 00
Button's genuine, per doz. pairs, discount			SAWS.		
37½ to 40 per cent.			Hand, Disston's, discount 12½ per cent		
Button's imitation	per doz.	5 00 9 00	S. & D., discount 40 per cent.		
German	0 60 0 60		Crosscut, Disston's	per foot	0 35 0 55
PRESSED SPIKES.			S. & D., discount 35 per cent. on Nos. 2 and 3.		
Discount 20 per cent.			Hack, complete	each	0 75 2 75
			" frame only	each	0 75 1 25
PULLEYS.			SASH WEIGHTS.		
Hothouse	per doz.	0 55 1 00	Sectional	per 100 lb.	2 00 2 25
Axle	0 22 0 33		Solid	1 50 1 75	
Screw	0 27 1 00		SASH CORD.		
Awning	0 35 2 50		Per lb.	0 28 0 30	
PUMPS.			SAW SETS.		
Canadian eastern	1 80 3 60		Lincoln and Whiting	per doz.	4 75
Canadian pitcher spout	1 40 2 10		Hand Sets, Perfect		4 00
PUNCHES.			X-Cut Sets,		7 50
Saddler's	per doz.	1 00 1 85	SCALES.		
Conductor's	3 00 15 00		Gurney Standard, 40 per cent.		
Flippers, solid	per set	0 72	Gurney Champion, 50 per cent.		
" hollow	per inch	1 00	Burrow, Stewart & Milne—		
RAKES.			Imperial Standard, discount 40 per cent.		
Wood	per doz. net	1 20 up	Weight Beams, discount 35 per cent.		
RAZORS.			Champion Scales, discount 50 per cent.		
Elliot's	per doz.	4 00 18 00	Fairbanks standard, discount 35 per cent.		
Geo. Butler's & Co.'s		4 00 18 00	" Dominion, discount 55 per cent.		
Boker's	7 50 11 00		Richelieu, discount 55 per cent.		
" King Cutter	12 50 15 00		Warren's new Standard, discount 40 per cent.		
Wade & Butcher's	3 60 10 00		" Champion, discount 50 per cent.		
Thiele & Quack's	7 00 12 00		" Weightbeams, discount 35 per cent.		
Carbo Magnetic	15 00		SCREW DRIVERS.		
Griffon Barber's Favorite	10 75		Sargent's	per doz.	0 65 1 00
Griffon No. 65	13 00		SCREEN DOORS.		
Griffon Safety Razors	13 50		Common doors, 2 or 3 panel, walnut		
Griffon Stropping Machines	13 50		stained, 4-in. style	per doz.	6 50
Lewis Bros' "Klean Cutter"	8 50 10 50		Common doors, 2 or 3 panel, yellow and		
Clauss, 50 and 10 per cent.			green stained, 4-in. style	per doz.	6 75
Clauss Stropps, 50 and 10 per cent.			Common doors, 2 or 3 panel, in natural		
REGISTERS.			colors, oil finish	per doz.	8 75
Discount 40 per cent.			3-in. style 20c. per dozen less.		
RIVETS AND BURNS.			SCREWS.		
Iron Rivets, black and tinned, 60 and 10 p. c.			Wood, F. H., bright and steel, discount 87½		
Iron Burrs, discount 55 per cent.			per cent.		
Extras on Iron Rivets in 1-lb. cartons, 1c.			Wood, R. H., bright, dis. 82½ per cent.		
per lb.			" F. H., brass, dis. 80 per cent.		
Extras on Iron Rivets in ½-lb. cartons, 1c.			" R. H., " dis. 75 per cent.		
per lb.			" F. H., bronze, dis. 75 per cent.		
Copper Rivets, with usual proportion burrs, 45			" R. H., " dis. 70 per cent.		
per cent. Cartons, 1c. per lb. extra, net.			Drive Screws, dis. 87½ per cent.		
Copper Burrs only, discount 50 and 10 per cent.			Bench, wood	per doz.	3 25 4 00
Extras on Tinned or Coppered Rivets, ½-lb.			" iron	4 25 5 00	
cartons, 1c. per lb.			Set, case hardened, dis. 60 per cent.		
RIVET SETS.			Square Cap, dis. 50 and 5 per cent.		
Canadian, discount 35 to 37½ per cent.			Hexagon Cap, dis. 45 per cent.		
ROPE, ETC.			SCYTHES.		
Sisal	0 11½		Per doz. net	6 00 9 00	
Pure Manila	0 14½		SCYTHE SNATHS.		
British "Manilla"	0 20½ 0 22		Canadian, discount 40 per cent.		
Cotton, 3-16 inch and larger	0 20½ 0 22		SHEARS.		
" 5-32 inch	0 25 0 27		Clauss, nickel, discount 80 per cent.		
" 1 inch	0 25 0 28		Clauss, Japan, discount 67½ per cent.		
Russia Deep Sea	0 16		Clauss, tailors, discount 40 per cent.		
Jute	0 09		Seymour's, discount 50 and 10 per cent.		
Lath Yarn, single	0 10		SHOVELS AND SPADES.		
" double	0 10½		Canadian, discount 45 per cent.		
Sisal bed cord, 48 feet	0 65		SINKS.		
" 60 feet	0 80		Cast iron, 16 x 24	0 85	
" 72 feet	0 95		" 18 x 30	1 00	
RULES.			" 18 x 36	1 40	
Boxwood, discount 55 per cent.			SNAPS.		
Ivory, discount 37½ to 40 per cent.			Harness, German, discount 25 per cent.		
SAD IRONS.			Lock, Andrews'	4 50 11 50	
Mrs. Potts, No. 55, polished	per set	0 80	SOLDERING IRONS.		
No. 50, nickel-plated,	"	0 90	1, ½-lb.	per lb.	0 37
Common, plain	4 50		2-lb. or over	0 34	
" plated	5 50		SQUARES.		
SAND AND EMERY PAPER.			Iron, No. 493	per doz.	2 40 2 55
R. & A. sand, discount, 40 and 5 per cent			" No. 494	3 25 3 40	
Emery, discount 40 per cent.			Steel, discount 60 to 60 and 5 per cent.		
Emery (Kurt's) ½ to 10 per cent. advance			Try and Bevel, discount 50 to 52½ per cent.		
on lot.			STAMPED WARE.		
			Plain, discount 75 and 12½ per cent. off re-		
			vised list.		
			Retained, discount 75 per cent. off revised list.		

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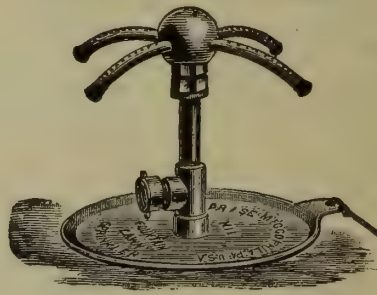
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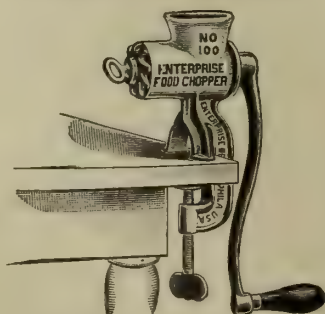
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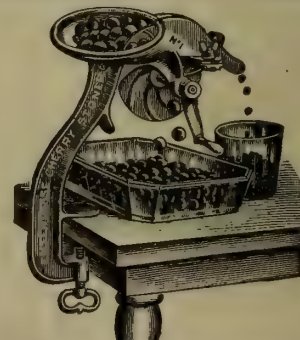
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 Dominion Wire Mfg. Co., Montreal and Toronto.
 Greening, B. Wire Co., Hamilton.
 Ironside, Son & Co., London, Eng.
 McGregor - Banwell Fence Co., Windsor, Ont.
 Merrick, Anderson & Co., Winnipeg.
 Oneida Community, Niagara Falls.
 Ontario Wire Fencing Co., Picton, Ont.
 Owen Sound Wire Fence Co., Owen Sound
 Page Wire Fence Co., Walkerville, Ont.
 Walter, E. F., & Co., Montreal.
 Western Wire & Nail Works, London, Ont.

Woodenware.

Taylor-Forbes Co., Guelph, Ont.
 United Factories, Toronto.
 Waggoner Ladder Co., London, Ont.

Wrapping Papers.

Canada Paper Co., Toronto.
 McArthur, Alex., & Co., Montreal.

Want Ads.

In this paper cost 2 cents per word first insertion, 1 cent per word subsequent insertions. Contractions count as one word, but five figures (such as \$1,000) may pass as one word. Cash remittance to cover cost must in all cases accompany orders, otherwise we cannot insert the advertisement. When replies come in our care 5 cents additional must be included for forwarding same. Many large business deals have been brought about through advertisements of 20 or 30 words. Clerks can be secured, articles sold and exchanged, at small expenditure.

MACLEAN PUBLISHING CO., Limited
Montreal and Toronto.

\$2 FOR THIS SMALL SUM THE \$2

MANUFACTURER and SUPPLY MERCHANT

may keep posted on new openings for trade.

The CANADIAN CONTRACT RECORD

reports weekly all projected building and other construction works throughout Canada as well as new business enterprises.

Send your name and address with \$2 for a year's subscription to

Canadian Contract Record

\$2 TORONTO and MONTREAL \$2

BUY THIS BOOK

SUCCESSFUL ADVERTISING—
How To Accomplish It.—By J.
Angus MacDonald.

Every Merchant and Salesman
will find it full of invaluable matter relating to
the selling of goods. Chuck full of suggestions
and instruction. Enthusiastically endorsed
by press and advertising authorities.

Sent postpaid for \$2.00.

MACLEAN PUBLISHING CO.

LIMITED

TECHNICAL BOOK DEPT. TORONTO.



COVERT MFG. CO.
West Troy, N.Y.

Auto Screw Jack

Harness Snaps, Chain, Rope and Web
Goods, etc.

FOR SALE BY JOBBERS AT MFRS. PRICE

PRIEST'S CLIPPERS



Wiebusch & Hilger, Limited, special New York
representatives, 9-15 Murray Street.

WORKERS in BRASS and COPPER

You often want Tubing, Sheets
or Rods of special sizes—We serve
these needs, quickly, cheaply.

Write us about it.

The Booth Copper Co.,

LIMITED,

119-123 Queen St. East,
TORONTO.

IRONSIDE FOR IRON

OUR SPECIALTIES ARE
BRITISH AND FOREIGN IRON, STEEL, METALS, BARS, PLATES,
SHEETS, BOLTS and NUTS, TIN PLATES, Etc.

Sole Licencees for PAGE'S PATENT WIRE STRETCHER, and we
are willing to sell the right of manufacture in Canada on a Royalty basis.

IRONSIDE'S PATENT WIRE CUTTERS, guaranteed to cut any wire

We publish a "Canadian Metal Price List" monthly. Quotations in Dollars and Cents.
(C.I.F.) We will send this, and our "Weekly Market Report" on receipt of address.

IRONSIDE, SON & CO., 16 Water Lane
Gt. Tower St., LONDON, ENG.
E.C.

CHAS. F. CLARK, President.

CHAS. L. BECKWITH, Secretary.

...ESTABLISHED 1849...

BRADSTREET'S

Capital and Surplus, \$1,500,000.

Offices Throughout the Civilized World.

Executive Offices: Nos. 346 and 348 Broadway, New York City, U.S.A.

THE BRADSTREET COMPANY gathers information that reflects the financial condition and the controlling circumstances of every seeker of mercantile credit. Its business may be defined as of the merchants, by the merchants, for the merchants. In procuring, verifying and promulgating information no effort is spared, and no reasonable expense considered too great, that the results may justify its claim as an authority on all matters affecting commercial affairs and mercantile credit. Its offices and connections have been steadily extended, and it furnishes information concerning mercantile persons throughout the civilized world.

Subscriptions are based on the service furnished, and are available only by reputable wholesale, jobbing and manufacturing concerns, and by responsible and worthy financial, fiduciary and business corporations. Specific terms may be obtained by addressing the Company at any of its offices. Correspondence invited.

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HALIFAX, N.B.
OTTAWA, ONT.
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QUEBEC, QUE.

LONDON, ONT.
ST. JOHN, N.B.
WINNIPEG, MAN.

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THOS. C. IRVING, Gen. Man. Western Canada. Toronto.

WHY Sell Old Style Cork Screws?

The People Want

WALKER'S SELF-PULLING

which draws the cork, cuts the wire, removes crown, seal and aluminum stopper. Does the whole thing. Each one tested and guaranteed. We manufacture over 50 different styles.

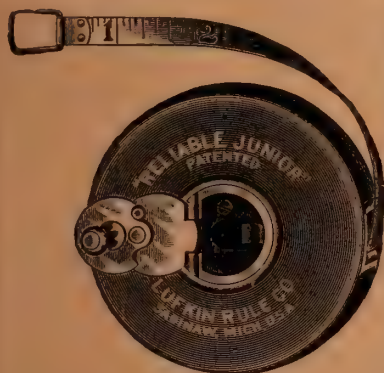
ERIE SPECIALTY COMPANY, Erie, Pa., U.S.A.



IRON

Bars in Flats, Rounds, Squares,
Ovals, Half-Ovals, Half-Rounds and
Bands. Also Wrought Washers.
GOOD QUALITY. PROMPT SHIPMENT.

London Rolling Mill Co.
Limited,
LONDON, CANADA.

STEEL

LUFKIN MEASURING TAPES

Steel, Metallic, Linen, Pocket, Ass Skin,
Pat. Leather, Bend Leather, Etc.

ARE THE BEST AND MOST POPULAR TAPES IN THE WORLD.
YOUR STOCK IS NOT COMPLETE WITHOUT THEM.

LUFKIN RULE CO., Saginaw, Mich, U.S.A.

London Office and Warehouse—48 Lime St.

New York City Branch—280 Broadway.

For sale by ALL PROMINENT CANADIAN HARDWARE JOBBERS.

THE PROOF OF THE PUDDING IS THE EATING OF IT.

RETURNED

JAN 25 1906

to Ship

V. Book 29

Page 33



"HURON RED HOT."

It is easy to MAKE CLAIMS, and furnace manufacturers work overtime in this respect. Careful and conservative dealers are not fooled by extravagant assertions on the part of manufacturers or salesmen. All heating systems are subject to the same natural laws. Successful furnaces must be SENSIBLE and PRACTICAL, and must endure the test of time.

We offer in our

"Huron Red Hot"

a Furnace that meets these requirements; that has been tried in season and out of season, and never found wanting.

Its price will interest you.

The Western Foundry Co., Limited, Wingham, Ont.

Makers of HURON STOVES, RANGES and FURNACES.



Est. 1908.



Inc. 1895.

Black Diamond File Works G. & H. Barnett Company

Twelve PHILADELPHIA Medals



Awarded
By **JURORS** at
International Expositions
Special Prize

Gold Medal at Atlanta, 1895



The FISK Detachable Motor Tire.

The most efficient, satisfactory and durable Motor Tire yet manufactured. The Fisk Tire is mechanically attached and has none of the weaknesses of the automobile tire which is held to the rim by air pressure. There is absolutely no creep or roll to the Fisk Motor Tire and it cannot come off the wheel.

Manufactured in Canada solely by

THE GUTTA PERCHA & RUBBER MFG. CO.
OF TORONTO, LIMITED.

Temporary Offices:

15 East Wellington Street, Toronto.

Branches—MONTREAL, WINNIPEG.

B. & S. H. THOMPSON & Co.

LIMITED

53 St. Sulpice Street, MONTREAL

DOMINION OF CANADA SALES AGENTS FOR THE

American Sheet & Tinplate Company Departments

OF THE

United States Steel Products Export Company

NEW YORK.

GALVANIZED SHEETS.

BLACK SHEETS, Plain and Polished,
in all quantities.

TINPLATES, Coke and Charcoal.

LARGE TINNED SHEETS.

CANADA PLATES, Black and Gal-
vanized.

BLACK PLATES, &c.

SADLER & HAWORTH

LEATHER

BELTING

One Reason Why

our belting is the best
is that only expert
buyers select our hides.
Buying hides is a busi-
ness in itself and if the
hide isn't right the belt
can't be.

Montreal, Toronto.

HARDWARE AND METAL

AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, OCTOBER 15, 1904.

NO. 42

HENRY BOKER

FINEST QUALITY BEST FINISH

ARROW WINGED SHOE I & S. WORKS
TRADE MARKS REG'D

SKATES

LARGEST VARIETY LATEST DESIGNS

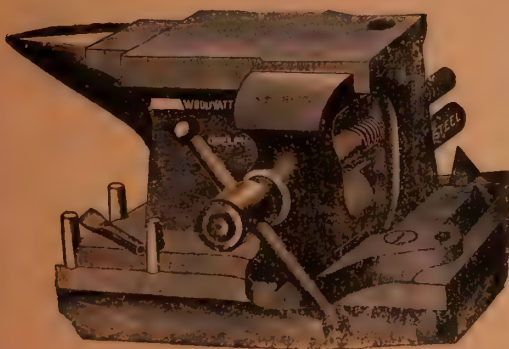
FOR SALE BY LEADING WHOLESALE HOUSES.

IT'S "QUEEN'S HEAD"

That's all you need to know
about Galvanized Iron.

JOHN LYSAGHT, Limited, Makers, A. C. LESLIE & CO., MONTREAL
BRISTOL, ENG. Managers Canadian Branch.

ONE OF THOSE SENSIBLE THINGS THAT APPEALS
TO EVERY MAN WITH A HOME



Handy Anvil and Vise

WHAT HOUSEHOLD DOES NOT WANT ONE? HOW MANY
THAT DO NOT HAVE ONE!

The situation waits upon the hardware dealer to suggest this handy,
inexpensive Anvil and Vise, a machinist's and a blacksmith's tool in one.

ORDER FROM YOUR JOBBER. SEND FOR CATALOGUE OF HARDWARE SPECIALTIES.

Taylor-Forbes Company,

Montreal Branch :
9 De Bresoles St.

The Largest Manufacturers of Hardware in Canada.

LIMITED.

GUELPH, CANADA

FELT WEATHER STRIP

No. 0

RETURNED

OCT 15 1904

Cut Bush 25



For sides, tops and bottoms of windows.

No. 1

Pay 27
cut

RETURNED

OCT 15 1904



For sides and tops of doors and large windows.

No. 4

RETURNED

OCT 15 1904



For joints between sashes and for centre of double doors.

No. 2

RETURNED

OCT 15 1904



For bottoms of doors.

WRITE FOR PRICES

RICE LEWIS & SON

LIMITED

TORONTO.

CANADIAN CORDAGE & MFG. CO., Limited

CORDAGE

OF EVERY DESCRIPTION.

MANILA ROPE,
SISAL ROPE,
LATHYARN.

BINDER TWINE:

SISAL,
STANDARD,
MANILA.

All qualities and lengths, 500 ft., 550 ft., 600 ft., 650 ft. to the pound.

We guarantee our goods to be absolutely Pure and free from all substances calculated to increase weight. Consumers will find on careful test that our goods are the Most Economical, Highest quality, Low prices.

Wire, Write or 'Phone

Canadian Cordage & Mfg. Co.

Long Distance 'Phone 162

LIMITED

PETERBOROUGH, ONTARIO, CANADA

The Canadian Rubber Co.
of Montreal.

MANUFACTURERS OF

Rubber Belting,
Hose, Packing,
Valves, Gaskets,

ETO., ETO.

We make a specialty of

HORSE SHOE PADS

the best in the market.

Write for Prices and Circulars.

Head Office : : MONTREAL

BRANCHES—TORONTO, WINNIPEG and VANCOUVER

Other Tools are very
good Tools, but

“YANKEE TOOLS” ARE BETTER



No. 15. "Yankee" Ratchet Screw Driver, with Finger Turn on Blade.



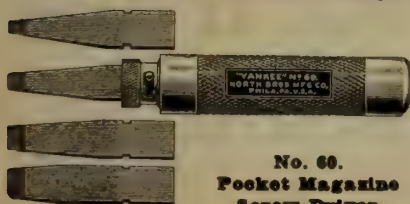
No. 30. "Yankee" Spiral-Ratchet Screw Driver, Right and Left Hand.



No. 41. "Yankee" Automatic Drill, Eight Drill Points in Handle.



No. 0. "Yankee" Reciprocating Drill for Iron, Steel, Brass, Wood, etc.



No. 60.
Pocket Magazine
Screw Driver.

Our "YANKEE" Tool Book
tells all about them. Mailed
free on application.

Manufacturers also of

**LIGHTNING,
GEM and
BLIZZARD
Ice Cream Freezers.**

**Toy Freezers,
Ice Shaves and
Ice Chippers.**

**Fluting Machines,
Hand Fluters.**

**Sold by Leading Jobbers
in Canada.**

NORTH BROS. MFG. CO.,

Philadelphia, Pa., U.S.A.

THOS. BIRKETT & SON CO.,

LIMITED

Wholesale Hardware Merchants

OTTAWA, ONT.


Seasonable Goods such
as....

Axes, Cross-Cut Saws,
Horse Blankets, Sleigh
Bells, Game Traps, Cut-
lery in Cases, etc.

GET OUR PRICES BEFORE ORDERING.

P.S.—Bread Makers in 2 sizes for 4 and 8 Loaves.

RUSWIN
FOOD CUTTERS



**EASE
OF OPERATION**

is one of the many advantages
of the Russwin Food Cutter.
It CUTS—does not tear, grind or
mash. Knives are self-sharpen-
ing—easily adapted to cut
coarse, cut fine, or pulverize.
Try it. For sale everywhere.
Made by

RUSSELL & ERWIN MFG. CO.
NEW BRITAIN, CONN.

—FOR SALE BY—

The KENNEDY HARDWARE CO., Limited

49 Colborne St., TORONTO, ONT.

“Gordon Crown” Galvanized Sheets

None Better.
Lots Worse.

Prices cheerfully quoted
for stock shipment
or import.

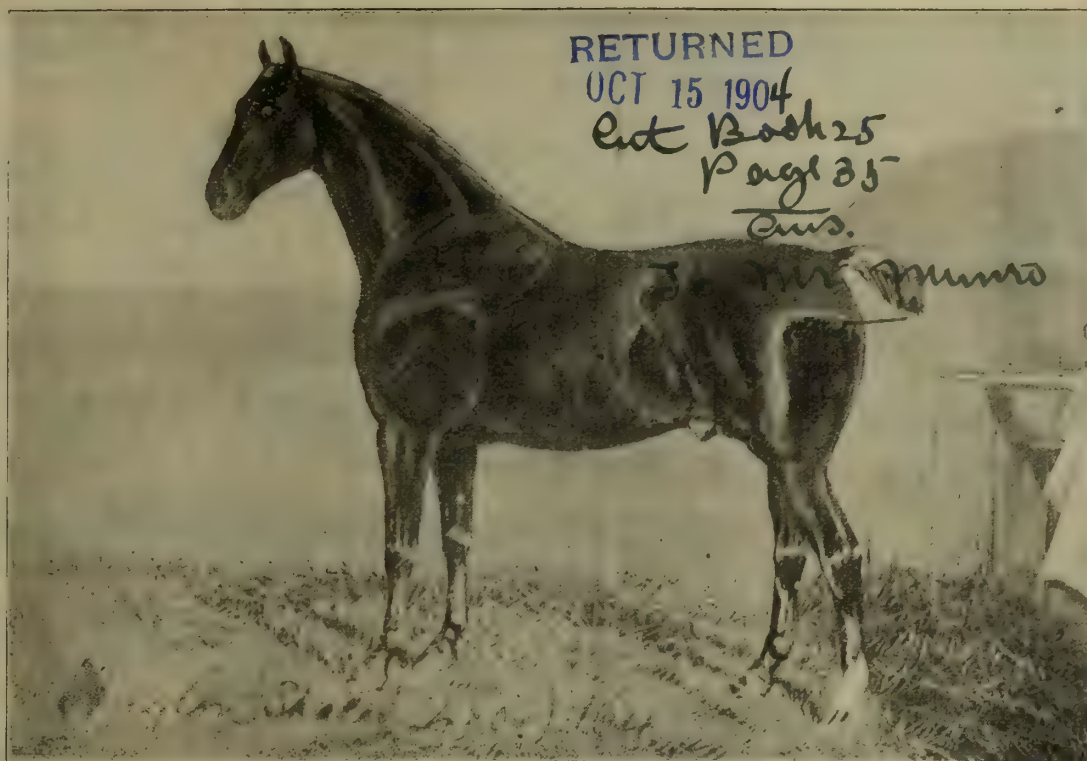
M. & L. Samuel, Benjamin & Co.

503 Temple Building - TORONTO.

English House—16 Philpot Lane, LONDON, ENGLAND.

Halters
Collar
Pads
Whips
Lashes
Gurry
Combs
Brushes
Horse
Shoes
Nails

Blankets
Bridle Bits
Snaps
Buckles
Toe Caulks
Rasps
Cushion
Pads
Halter
Chains
Surcingles

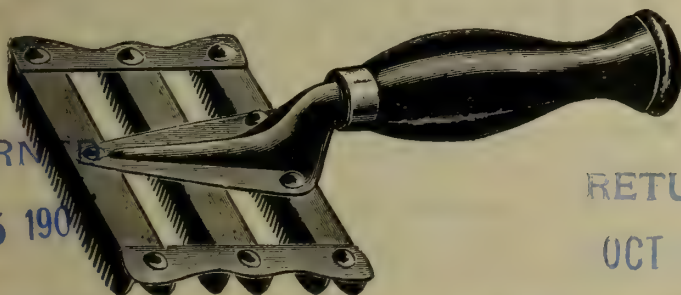


"When the leaves begin to fall, don't forget 'Nancy' in the stall."

The sign of approaching winter should be a gentle tip for you to pick up your stock of

Horse Blankets, Etc.

Our line is as varied in price as it is in stripes and checks. Ask our representatives to show you their samples, or write for trade prices.



RETURNED

OCT 15 1904

QUOTE LOW
SHIP QUICK

Lewis Bros. & Co.

Importers and Distributors

M o n t r e a l

Toronto Vancouver Ottawa

Address all
correspondence
to Montreal.



Just like fishing

Building up trade is just like fishing.

If you use the right kind of bait and cast your line where the kind of fish you want are most plentiful, you'll quite likely get a number of bites.

Then if you go about it right you are pretty sure to land most of them.

Apply the illustration to business.

If you want to catch the hardware trade cast your line where all the good hardware merchants in Canada congregate every week—looking for bait to build up their businesses with—in **HARDWARE AND METAL**. But

Suppose results don't come at first.
What be yew goin' tur dew?
Take out yewr ad, and kick yewrself,
An' go ter feelin' blew?
Uv course yew hain't; yew're goin' tew fish,
An' bait an' bait agin';
Bimeby some nibbles 'n bites 'll come,
Then yew'll pull 'em in.

Our Department of Advertising Service is now providing good bait for a number of our advertisers—and stands ready to help a few more in this connection.

Drop us a line about it.

Hardware and Metal

to Front St. E.
Toronto.

232 McGill St.
Montreal



Department of Advertising Service ~

Our Cap and Set Screws are British made

Now we don't expect any business man to buy from us on that account, but we can show that quality of our production is A 1, and in the matter of price, we can shade American price, and on these grounds we do expect your business—and we make good deliveries.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

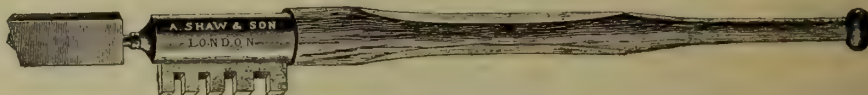
Established 1815

ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.



Agents for Canada: A. Ramsay & Son Company, Montreal

GLAZIERS' DIAMONDS



Ahead of all others in quality and workmanship. If sparks of fine quality, set by experts, are what you require, buy Diamonds of A. Shaw & Son's make.

Canadian Agent

GODFREY S. PELTON

388 ST. PAUL ST., MONTREAL

Clauss Brand

Fancy Oxidized Embroidery Scissors

FULLY WARRANTED.

Hand forged from finest steel. Pressed handles, hardened in water.

Full Crocus Finish. Finely Oxidized and Nickel-Plated.

CLAUSS SHEAR CO., 169 Spadina ave., TORONTO, ONT.
I. A. TOBIAS, Canadian Agent.



CELEBRATED HEINISCH SHEARS

Tailors' Shears,
Trimmers' Shears,
Tinnners' Snips, etc.



ACKNOWLEDGED THE BEST.

R. HEINISCH'S SONS CO.

NEW YORK OFFICE, 155 Chambers S
NEWARK, N.J., U.S.A.



SEYMOUR SHEARS

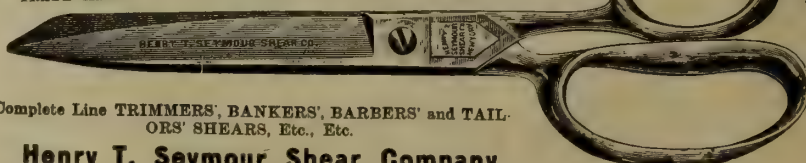
HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



TRADE MARK

Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.

Latest Catalogue will be sent in exchange for your business card.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the
NIAGARA WIRE LINK
OPEN RING TYPE.

Also made in CLOSED RING, THREE CHAIN
and DOMINION (or "Short") TYPES.

Oneida Community Cow Ties can be had of all
the leading jobbers. We invite correspondence
where any difficulty is experienced in obtaining
our goods.

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

Your Warehouse

needs a new scale, it may be—plat-
form variety. We have it—just the
very thing. Handsome, sound and
sure. Did you ever know of a

Gurney Scale

being anything but value received?

Send us a statement of your
needs. Then we can quote you
accurately.

SEND FOR CATALOGUE.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse: Western Warehouse:
The Gurney-Massey Co., Limited The Gurney Stove and Range Co.
Montreal, Que. Winnipeg, Man. Limited,

GREENING'S



PATENT COW TIES.

These Cow Ties
have stood the
test for years.
Undoubtedly the
best and strong-
est on the mar-
ket.

It will pay to handle only the best.

A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

THE B. GREENING WIRE CO.,
LIMITED
Hamilton, Ont. Montreal, Que

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.**

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.
LIMITED
MONTREAL and TORONTO



**"Pullman"
Lawn Sprinkler**

**IS YOUR
ORDER IN ?**

Send for Folder No. 14.
PULLMAN MFG. CO.
Rochester, N.Y., U.S.A.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and
ELECTRO PLATE.**

Ask for our Catalogue and Quotations.



Dundas Axe Works

DUNDAS, CANADA.

Write for Prices

P. BERTRAM, - Manager.

Ever called upon to buy

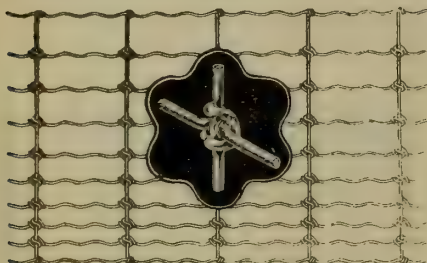
SEALS?

We make corporation seals,
and seals of all kinds.

Glad always to quote prices.

THE SUPERIOR MFG. CO.

58 Adelaide St. W., - TORONTO.



IDEAL FENCING

Is Strong and Durable, because Large Gauge (No. 9) Steel
Galvanized Wire is used throughout. SEE OUR EXHIBIT
AT PRINCIPAL FAIRS, or write for Catalogue.

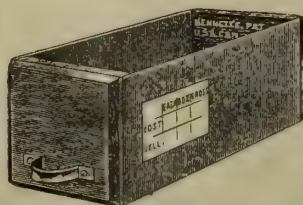
Write for Catalogue.

The McGregor-Banwell Fence Co., Limited,
WALKERVILLE, ONT.

Merrick, Anderson & Co., Winnipeg, Man.
Sole agents for Man. and N.W.T.

IF YOU INTEND MAKING ALTERATIONS WRITE
US FOR PRICES AND PARTICULARS
OF OUR

**Hardware
Shelf
Box.**



We can make boxes to fit your present shelving

...THE...

Bennett Manufacturing Co.

PICKERING, ONT.

DAVISON'S MINIATURE TOOLS.

A perfect working model wrench, exact size of cut.
Accurately proportioned and made exactly to scale.
Handsomely nickel-plated. Sells on sight.
\$2.00 per doz. Pearl Hand e, \$3 00 doz.



DAVISON MFG. CO., 112 Front St., Brooklyn, N.Y.

Genuine Pratts Astral Lamp Oil

Sold in all countries and recognized as the highest grade oil manufactured.

WHOLESALE ONLY

THE QUEEN CITY OIL COMPANY, Limited, - TORONTO, ONT.



HOOKS,

CUP and SQUARE HOOKS, in
BRIGHT IRON, BRASSED
IRON, and SOLID BRASS.

SCREW RINGS and GENERAL BRASS FOUNDRY

JONES & BARCLAY,

Bath Row, BIRMINGHAM, Eng.

SPECIAL DROP FORGED SPRINGS

THE WALLACE BARNES CO.,

BRISTOL, CONN.

DILLON-HINGE-STAY

Why handle Barb and Coiled Wire at no profit when
you can have a fair margin on our

Dillon Fencing



Got up specially
for the hardware
trade.

Easily put up
and at the most mod-
erate prices.

Write for prices in car or small lots.

CAVERHILL, LEARMONT & CO.,

Montreal and Winnipeg

Eastern and Western Agents

OWEN SOUND WIRE FENCE CO., Limited

Owen Sound, Ont.

Cordage

Of every description.

Net Mountings,

Sand Line,

Unoiled Cordage,

Marline,

Extra Long Lengths,

Ratline,

Shingle Yarn.

Core Rope,

Oil Well Cables,

Russian Packing,

Deep Sea Lines,

Ancor Line,

Good Transmission Rope,

Engine Packing.

Clothes Lines,

Only Best Material Used.

Log Line

Twine.

Dangerous to use Inferior Cordage.

Mail

Orders

Now

To us and

Recieve

Exceptional

Attention.

Low-priced goods are not always
the cheapest.

TRUE BRAND



CUTLERY

POCKET CUTLERY, RAZORS, SCISSORS,

QUALITY GUARANTEED

BEST GOODS

RIGHT PRICES

E. F. WALTER & CO.,

166 and 168
McGill St.,

Montreal

PRICE is a good thing,—but,
QUALITY is better.

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited

LONDON, ONT.

STEEL SNOW SHOVELS

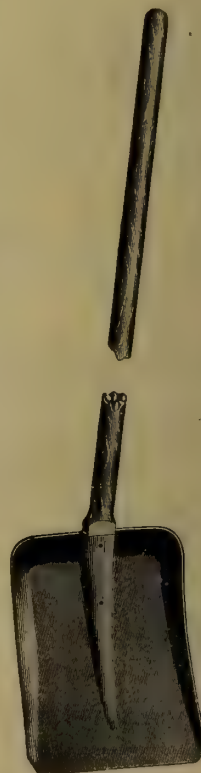
Strong and Durable

YET LOW IN PRICE

Your stock will lack one of the best selling Shovels if
you do not have KEMP'S STEEL SNOW SHOVELS.

Finished in Japanned

or Galvanized.



KEMP MANUFACTURING CO., TORONTO, Canada

Gossip About Ourselves

A Personal
Talk by
The Editor

FOR some time we have been planning an extension which we believe will be appreciated by our readers and which gives us a particular pleasure to announce as being well under way. As our readers all know, we have, since the organization of the National Master Plumbers' Association of Canada, reported in full the convention proceedings of that body, and have in every way endeavored to extend the influence and scope of that and the affiliated associations.

As a result of these efforts and a continuance of our market reports and general news service we have retained on our subscription list the great majority of the larger plumbing firms throughout the country as well as practically all the hardware firms who handle or install plumbing goods. Probably about three-quarters of the plumbing goods in use in Canada have been installed by readers of Hardware and Metal.

Yet as a result of a feeling on the part of some of the supply houses in the Dominion that a distinctly plumbing paper was desired in Canada an American plumbing journal was induced to start a Canadian edition, which was given a thorough trial.

Though this paper was conducted with enterprise and shrewdness it was not a success, and the Canadian edition was discontinued.

Hardware and Metal is to-day the only paper in Canada giving attention to the plumbing and heating trades.

During the advent of our American contemporary in Canada we did not lose one subscriber among our plumbing friends. We have appreciated this, and determined some months ago that whenever it was possible we would add to the paper some features that would make it of more service to those interested in the plumbing and heating trades than it has ever been in the past. It is, therefore, with particular pleasure that we announce that such an extension

will be inaugurated in the next week or so.

We have made arrangements with some of the best plumbing goods dealers to have photographs taken and detailed information given concerning some of the best work done by them. This will be supplemented by technical articles on a variety of topics, all of interest to plumbers or heating engineers.

We would be pleased to receive such articles from any reader between the Atlantic and the Pacific. Once a month we intend making our issue of special interest to plumbers and heating engineers, and

**WE WILL SEND COPIES OF THIS
MONTHLY ISSUE TO EVERY
PLUMBER IN THE DOMINION.**

The first issue to be sent out in this way will be that of October 29, so we would consider it a favor if any of our readers having any information for the trade would send it along in time for that issue.

The use of plumbing goods in Canada has within the last four or five years increased many times, yet this business is still far from the magnitude it is bound to attain when Canadian towns have instituted water works systems and have awakened to the necessity of proper sanitation.

We trust that this development of demand will be accompanied by a similar development of production of plumbing goods within the Dominion. It is also to be hoped that, as the business grows in importance, the municipalities will enact regulations which will make impossible the installation of plumbing goods by incompetent workmen, for it is well established that nothing is more inimical to public health than a bad system of sanitation in the home. The time has passed when any one but a competent workman should install plumbing, and every person who takes plumbing contracts should either be

technically equipped to do so, or should have in his employ competent workmen who are so equipped with technical knowledge.

We hope that we may in the weeks to come assist materially in elevating plumbing practice to a higher standard throughout the Dominion.

* * *

Another matter we would like to refer to is the reader's attitude to the advertisements in the paper. Several of the shrewdest retailers in the country have stated quite frankly that though they carefully peruse the reading columns they always found most news, got most information, from the advertisements. This is as it should be. We are proud of the fact that our advertisers are, as a body, representative of the best Canadian trade. There are a score or more of firms not yet using our columns whose advertisements would add dignity and interest to the paper, yet we do not hesitate to say that those of the trade who are now using our columns are, as a rule, representative of the best in the trade—not of the cheapest or of the unreliable. Their intention is to give the freshest news concerning their goods: it is only by getting this news while it is fresh that the retailer can hope to keep up to date. The retailer should make it his practice to read through the advertisements in each issue and, after he is through, to pass the paper on to his clerks, that they may also be enabled to keep in touch with the developments.

It is a noteworthy fact that to-day the bulk of the inquiries from advertising comes from the larger firms. Some of these instruct one or another member of their staff to read the paper each week to get information about new things. An item in a recent issue drew attention to a new line—the desire being to interest plumbers. To the surprise of the advertiser the promptest inquiries came from three of the largest machinery firms in the country. These

firms systematize their advertisement reading, and picked out a new line they were interested in, and followed up the matter by writing regarding the line at once. If these firms had not mentioned Hardware and Metal it is doubtful if the advertiser would have credited the paper with the results secured.

* * *

While speaking frankly to our readers let us once more express appreciation

of the interest taken by our subscribers in our articles on window dressing. During the past week we have received two of the best photographs of window display that have come in for some time. These will be published as soon as possible and will be followed by other views which may be sent us by our readers. For those which have been sent us we express sincere appreciation.

D. O. M.

Canadian Agents Report

Canadian Agencies Wanted.

THE agency department of one of the wealthiest and most influential of the leading Australian firms, with branches and offices in various States, is anxious to secure the sole Australian representation of Canadian Manufacturers who have a desire to exploit this country. The firm in question, at the present time, holds several British and continental agencies, particularly in hardware and dry goods lines. As the prestige of this house is beyond question, as its position is undoubted, this opportunity offers exceptional advantages to all Canadian manufacturers requiring representation in this country. The company referred to does a very extensive indent business, and wishes to supplement its existing agencies with some Canadian goods, in order to render its sample collection a representative one. I shall be glad to receive advices from any Canadian firms to whom this intimation may prove of interest. All catalogues and price lists forwarded will be placed forthwith before the manager of this business, at whose hands they will receive every care and attention. Personally, I am of opinion that this opportunity intimation should not be overlooked when the exceptional repute of any business done by this very important mercantile house is considered. Should manufacturers prefer to communicate direct with the inquirers, their address can be obtained on application to the Department of Trade and Commerce, Ottawa. (Quote reference No. 2).—From report of D. H. Ross, Canadian Commercial Agent, Melbourne, Australia.

Canadian Agricultural Machinery.

The coming season in Australia promises to easily establish a record so far as importation of Canadian agricultural machinery is concerned. Last year importers were at their wits end to supply the demand, and in many cases were unable to fill the orders. Recent shipments of "made in Canada" farming implements and machinery comprised over 300 tons to Freemantle, 2,300 tons to Adelaide, and 1,759 tons to Melbourne. From careful inquiries made, I have ascertained that the 4,359 tons noted form only a small proportion of the shipments to arrive at the ports named, whereas, there will be very much increased imports at other Australian centres. This business is altogether attributable to the splendid representation which these lines receive. Everything points towards a splendid season for dealers in farming machinery, and the orders already received for forward delivery are of a most encouraging nature.—From report of D. H. Ross, Canadian Commercial Agent, Melbourne, Australia.

Freights to Manchester.

The subject of freight is one of absorbing interest to shippers the world over, and in these strenuous days when competition is so keen, the saving of ever so little per ton is a factor in securing orders and establishing a permanent trade. Unfortunately eastward freights are much higher than freights westward, and the reason is plain. Contracts for freights eastward are made some time in advance of sailing, there are thousands of tons more freight offered east than west, and in some cases vessel owners can almost make their

own price, whilst westward many ships proceed with only a part cargo, therefore are willing to take freight at nominal prices. A manufacturer of iron products, about to commence shipping to Montreal, was quoted a freight rate of 12s 6d, or \$3.03 per ton, and to Toronto £1 6s 6d, or \$6.43 per ton. A case in which freight rates militate largely against producers, in fact, is prohibitive, is in the pine doors from British Columbia, where the freight rate per door to Liverpool is 2s, or 49 cents, and a pine door to answer the same purpose from the Baltic, can be delivered freight paid to Manchester for a trifle over 3s or 73 cents.—From report of P. B. MacNamara, Canadian Commercial Agent at Manchester, Eng.

Canadian Indifference.

The ss. Monarch, the largest and finest of the vessels belonging to the Canadian direct service to South Africa, arrived in Cape Town on Monday last without bringing a single commercial representative, trunks of exhibits or samples from Canada, much to the disappointment of a large section of the business community. The very generous offer of Sir Alfred Jones to the Manufacturers' Association of Canada had been freely announced in the press throughout South Africa. It was expected that Canadian exporters would have taken advantage of the offer by sending a few of their number to look over the field. Had they done so, an impetus would have been given to Canadian trade all over South Africa. Soon the conditions of affairs on the Rand will reach a full measure of prosperity and returning confidence will unlock those large sums at present awaiting investment. This factor of good omen is also to be noticed that the surplus stocks of South Africa sent over after the war and due to over-confidence on the part of importers have to a large extent been worked off; more importations will be necessary, and are Cana-

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

dian manufacturers going to allow others to obtain this trade?—From report of James G. Jardine, Canadian Commercial Agent, Cape Town, Cape Colony.

Heating Apparatus at Sydney.

A city architect is in correspondence with Canadian firms relative to securing heating apparatus for one of the largest office buildings in this city. This indicates an opening for an enterprising Canadian firm, and one to which I have more than once called attention. Outside of the city there is greater need of economical heating, particularly of schools and other public buildings, than within the city. It would require some time and capital to ensure success as much education would require to be done, but there can be small doubt that it could be made profitable.—From report of J. S. Larke, Canadian Commercial Agent, The Exchange, Sydney, Australia.

Water-Raising Appliances.

The display of wind-mills, pumps and other water-raising appliances at the annual show of the Royal Agricultural Society of Victoria, proved to be of great interest to visitors from the interior, where water conservation is now recognized as indispensable to progress. Through local agencies, some United States makes of air motors and pumps were shown to advantage. A Melbourne firm made a very creditable exhibition of locally made wind-mills. It was to be regretted that the great progress made by Canadian manufacturers in these lines, was not in evidence, as such an opportunity to advertise only comes round to the principal centres once a year. Reference to trade prospects in these States has been embodied in former reports, and detailed information has been supplied to Canadian manufacturers. The co-operation and loyal support of makers of wind-mills to their Australian agents is absolutely necessary in order to bring about the required results.—From report of D. H. Ross, Canadian Commercial Agent at Melbourne, Australia.

U. S. NATIONAL HARDWARE CONVENTION.

F. D. MITCHELL, secretary-treasurer of the American Hardware Manufacturers' Association, has sent out the following call to the members:

The annual meetings of the American Hardware Manufacturers' Association and the National Hardware Association will be held at Atlantic City, N. J., November 16, 17, 18, 1904, with manufacturers' headquarters at the St.

Charles Hotel and headquarters for the jobbers at the Hotel Rudolf.

At our joint convention with the National Hardware Association November last the Rudolf was filled, and many delegates were obliged to seek other quarters; our membership has been largely increased during the past year and the attendance in November will undoubtedly tax the capacity of both hotels. The writer finds that nine reservations have already been made with the St. Charles and as usual urges the expediency of making early reservations.

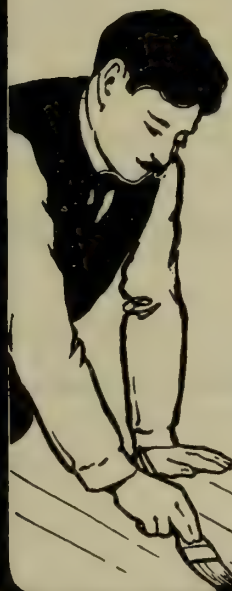
On or before November 1 a card showing number of room and rate per day and signed by its management will be mailed to those who have reserved accommodations at the St. Charles. This card should be retained until you settle your bill with the hotel. Should anything prevent your attendance such reservation may be canceled at any time prior to November 11.

S.W.P. Agents have a chance to "get in on the ground floor" by pushing

SHERWIN-WILLIAMS MODERN METHOD FLOOR FINISHES

Finished floors are rapidly driving out the dusty, germ collecting carpets. The demand for floor finishes is growing greater every day.

The Sherwin-Williams method of advertising direct to housewives makes the trade. The quality of the goods holds it.



Modern Method Floor Finishes represent a complete line of finishes for any floor, any style. They meet every demand for good floor finishes. It will pay you to get in on the ground floor and place them on your shelves. Now is the time to do it.

Write today for information.



THE SHERWIN-WILLIAMS CO. LARGEST PAINT AND VARNISH MAKERS IN THE WORLD

Canadian Headquarters and Plant: 639 Centre St., Montreal.

Warehouses: 86 York St., Toronto; 147 Bannatyne St., East, Winnipeg, Man.

1270

MILLIONS OF HORSESHOES.

"TWO million kegs, containing 160,000,000 horseshoes, are used annually in the United States and Canada, approximately speaking," said S. L. Martin, of Boston, who represents an iron manufacturing concern and was in New York recently.

"That was about the number used last year, and all the hue and cry about rubber shoes and automobiles is raised in the face of constantly increasing sale of horseshoes. As a matter of fact, the use of rubber horseshoes, which is confined almost altogether to the large cities, is a help to manufacturers. The sale of the old-fashioned shoes goes on increasing, and in addition to that the manufacturers have an opportunity to make the steel portion of rubber shoes. All so-called rubber shoes have a rim of steel in them, and it is usually of better metal and gives the manufacturer a wider berth for profits than the old-fashioned shoe."—Hardware.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

An Engineering Feat.

GRAHAM, MORTON & CO., LTD., engineers and contractors, Hunslet, Leeds, Eng., have issued an elaborate and beautifully illustrated booklet describing the erection of new works for themselves last year. Their large works were started about the middle of May and completed about the first of November. The book contains full-page illustrations showing the progress of the work each week during the five months and a half. The work is one which everyone interested in structural steel work will find of great interest, as it demonstrates the high standard reached by some of the most progressive structural engineering firms of England.

Lawn Mowers.

Catalogue "C," lawn mowers for the season of 1905, issued by the Taylor-Forbes Co., Limited, Guelph, Ont., is now ready for distribution. The first pages of this catalogue are devoted to the new "Empress" ball-bearing lawn mower. In addition to a drawing of the new mower sectional views are given which show the details of construction. On the other pages are given full information concerning "Woodyatt," "Star," "Daisy," "Philadelphia," "Ontario," "King Edward" mowers; grass boxes, horse mowers, two man or pony mowers, motor lawn mowers. Two full pages are devoted to descriptions, illustrations and prices of the parts of each mower. As Taylor-Forbes lawn mowers are staple goods in the trade every hardware dealer in the Dominion should provide himself with a copy of this catalogue. A copy will be sent on request to any hardware dealer who has not received one.

"Souvenir" Stoves and Ranges.

The Gurney, Tilden Co., Ltd., Hamilton, Ont., have ready for distribution their 1904-05 catalogue of "Souvenir" stoves and ranges. This company pays great attention to the artistic merit of their catalogues as well as to their stoves. The illustrations are "line drawings" of the best type, showing the beauty and detail of every stove to advantage. Among the lines shown are steel plate ranges for coal or wood or wood only; steel ranges for coal or wood; cast ranges for coal or wood or

Hammer the Hammer



A Life Saver.

Any revolver that can be handled in this manner is safe under any and all conditions. Safe to use, safe to carry, safe to stock your warehouse with. Just as safe to sell as it is to own. Dead stock is not any part of the **IVER JOHNSON** policy. They manufacture the article and then create the demand for it by making the best and advertising it extensively. A sane business man cannot afford to sell any other. What his customers require he should sell. Revolver buyers are now demanding the

IVER JOHNSON.

SEND FOR LITERATURE.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

New York Office:
No. 99 Chambers St.

wood only; double heaters for hard coal or coke, with or without oven; square base Oaks; hot blast and other heaters, agricultural furnaces, wood heaters, laundry stoves, tailor's heaters, etc.,—in addition, hollow ware and stove supplies. As this firm is one of the largest manufacturers of stoves in the Dominion, all the trade should take such an interest in their line as to write for a copy of their catalogues.

Glue Talk.

The American Tanners Glue Co., Gowanda, New York, have started issuing "Glue Talk" in the interests of the glue using trades, that the latter may become familiar with the properties and comparative qualities of glue. The reading matter is of especial interest to users of glue but dealers will find the little monthly magazine well worth writing for. Copies will be sent, on application, to readers of this paper.

TO OPERATE SALT WELLS.

Arrangements, which have been pending for a long time, have at last been concluded with English capitalists for the working of the salt wells at Winnipegosis. Experienced men are now on their way out from England and are bringing with them modern machinery.

CANADA AND THE WEST INDIES.

Owing to recent developments in trade between Canada and the West Indies the big steamship companies are beginning to realize that there may be in the near future a profitable trade with those islands. As a consequence, at least three well-known lines will tender for the service from Canada the present contract for which, now held by a Halifax firm, expires in July next.

The Elder-Dempster Company will tender for the service, and if successful, will place a fleet of steamships on the route. According to a dispatch received from Liverpool yesterday, the Royal Mail Steamship Line will also send in a tender and another large steamship line has under consideration an offer to the Canadian Government for the contract.

At any rate, indications point to a lively contest. The fact that the Hon. R. H. McCarthy, Collector of Customs, at Port au Spain, a warm advocate of closer trade relations, is at present in Canada, has further stimulated interest here. Mr. McCarthy is now touring Canada with a view to promoting the closer trade idea in all parts.

H. S. HOWLAND, SONS & CO. LIMITED

TEMPORARY WAREHOUSE:

Wholesale
only

212-218 COWAN AVENUE, TORONTO.

Only
wholesale

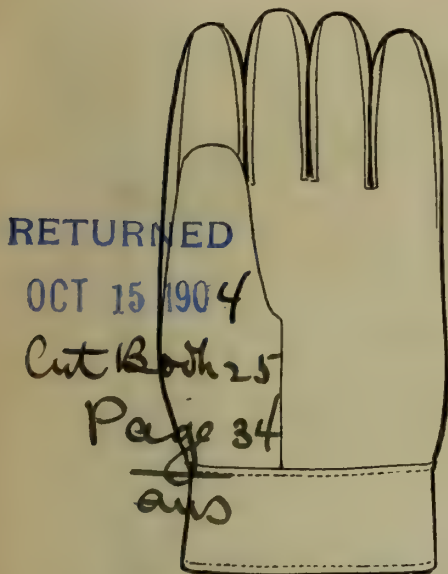
Sample Room at 21 SCOTT STREET, Telephone Main 4056.

Telephone:—Office, Park 1584.

(Where orders may be left if not convenient to visit our Warehouse at Parkdale.)

Telephone:—Warehouse, Park 1585

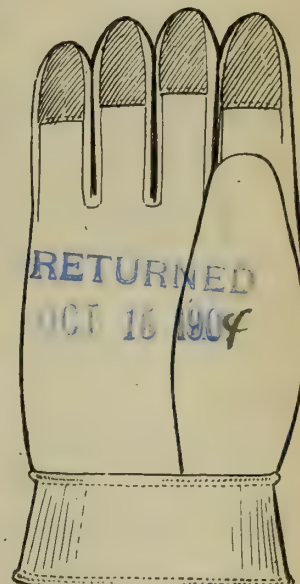
COTTON TICK MITTS AND GLOVES.



10 inches long, Cotton.

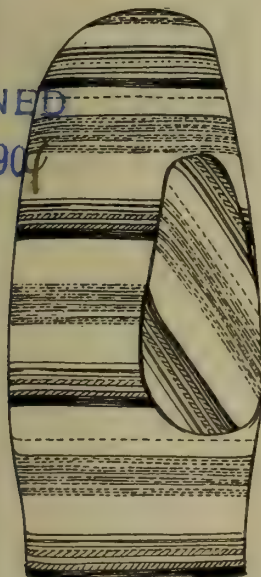


No.	Per dozen pair.
120, 10 inches long, Cotton, with Knitted Cuff	- - - 2.90
130, " " " " " "	Heavy - 3.60

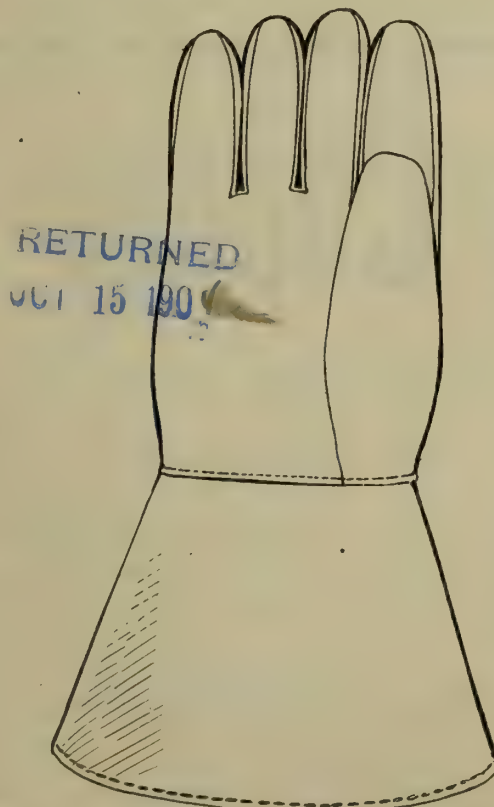


10 inches long, Cotton.
With Leather Tipped Fingers.

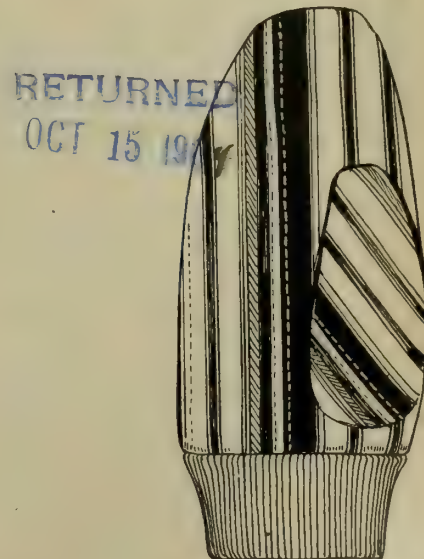
To York St. Office.



11 inches long, Cotton, Lined.



12 inches long, Cotton, with Gauntlet.



11 inches long, Cotton, Lined.
With Knitted Cuff

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

Made in Canada

The steel rail mill of
The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.
is now in operation and turning out

A. S. C. E.
Standard
Section

STEEL RAILS

of
Highest
Quality

Your specification will have our best attention.

Offices:

Canada Life Bldg.,
MONTREAL.

100 King St. West,
TORONTO.

Drummond, McCall & Co.

General Sales Agents

The Algoma Steel Co., Limited

Brass AND Copper Tubing

We have a very large stock of Brass and Copper pipe and fittings in all sizes up to 2 inches and will quote exceptionally low prices on same for immediate delivery.

Enquiries respectfully solicited.

THE FAIRBANKS COMPANY

MONTREAL.

TORONTO.

WINNIPEG.

VANCOUVER.

MACHINERY

Quebec.

Office of HARDWARE AND METAL,

232 McGill Street.

Montreal, Oct. 13, 1904.

A DECIDED improvement has been experienced in the machinery market within the past few days. Industrial concerns throughout the country are unusually active, and, in many cases, are increasing their output by the addition of new and up-to-date machinery and machine tools. Manufacturers of many lines are working overtime to keep up with their orders, and, at the present rate, some months will elapse before they are enabled to do so. The announcement of the immediate establishment by a manufacturing company of a new plant to employ over one thousand men, has caused machinery dealers to look forward to some large contracts within the near future. Nearly every line continues active, and in the smaller sizes of electrical machinery, business is very brisk; in fact, the general machinery trade is enjoying a particularly busy season.

Ontario.

Office of HARDWARE AND METAL,

10 Front Street East.

Toronto, Oct. 14, 1904.

There has been considerable activity on the machinery market during the past week, the volume of business done being larger than the week before. There has been a very good demand for wood-working machinery and boilers and engines. Iron-working machinery has also been more active than for several weeks.

Of course there is a good demand for electrical machinery.

Canadian Coke Works Completed.

The new plant of the International Coal and Coke Co., near the Crow's Nest branch of the C.P.R. is now nearing completion. It is designed to handle an output of 2,000 tons of coal daily; and A. C. Flumerfelt, president of the company, says that they will be producing 1,000 tons daily by the end of December. About 300 men are employed at the plant. The company have just completed a battery of 104 coke ovens, and now coke is being shipped to different British Columbia smelters.

WHICH IS THE ENGINE OF THE FUTURE?

IN answer to the query in these columns last week, Hardware and Metal has opinions from different sources regarding the same, two of which will be found below:

LAURIE ENGINE CO., MONTREAL.

C. E. Herd, of the Laurie Engine Co., Montreal, claims that the steam engine has a place to fill, and that for generations to come it will be found doing the same style of work in which it is engaged to-day. Builders of steam turbines are advertising very extensively at the present time to prove that the steam turbine is the machine for every power purpose, but up to the present time no advantage has been found over the steam engine for mill service or electric power generation.

In large power plants the steam engine is found to give perfect satisfaction on account of its steady rotative speed, and the synchronizing of alternators is made easily possible, but with steam turbines it has not met with any great success up to the present. With the Corliss engine the working parts are few and not delicate, therefore little likely to get out of order, consequently few repairs are necessary.

"We have engines running 20 years," says Mr. Herd, "day and night, and have required no repairs whatever, except to replace some of the wearing parts."

"In the majority of cases people who are buying plants are not the ones who are posted on relative merits, and it is often the case of the best salesman coming out ahead. All the data that has been accumulated regarding steam turbines comes from the shop in which they are manufactured, and further than that there is no information known regarding their operation. We do not feel the competition of the turbine. Corliss engines have had more to do with the industrial development of Canada than any other machine, since they are to be found in every large steam plant, whether for electric light or manufacturing purposes. Corliss engines can be adapted to any condition of service whatever."

CANADIAN WESTINGHOUSE CO.

In this connection, W. A. Duff, electrical engineer, sales agent for the Cana-

dian Westinghouse Co., said: "To-day, nobody is putting in a steam plant without giving the steam turbine careful consideration. Engineers and managing directors cannot afford to put in a plant which will be out of date in a few years, but they want the latest and best obtainable. We have a list of 29 steam turbine units, amounting to 20,000 k.w., installed before the first of April last, ten more have been shipped since, and there are on order 40 units, aggregating 70,000 k.w. This shows to a slight extent the importance of the steam turbine and the rate at which it is being recognized. When a large company, which was one of the largest steam engine manufacturers in existence, amalgamated with a large electric company in the United States, they were careful to announce that they were about to manufacture steam turbines, which shows further that the importance of the steam turbine has attained considerable proportions."

"There are many points in favor of the steam turbine, among which may be mentioned the small space necessary, compared with steam engine plants, thus by installing turbines the plant can be added to very considerably without enlarging the building. The foundations, which are always expensive, are no longer necessary in the turbines, as there is no vibration and the supports need carry only the dead weight, no bolts being necessary to hold it down. The turbine has a high economy not only at normal or full load, but particularly at low load, which cannot be said of the steam engine. Thus, if a power plant is being started in which it is expected that the service will increase considerably, it is out of the question to put in a steam engine of much larger capacity to provide for the expected growth, but in the case of the turbine it can be done with very economical results. There is little lubrication required and none on the internal parts, thus the condensed steam can be used over and over again. It is possible to take full advantage of super-heated steam up to 150 degrees centigrade, which is not at all feasible in the case of the steam engine."

New Automatic Knife Grinder.

THE accompanying cut represents the "Woods" new automatic knife grinder, with power feed, for grinding wood-planer, paper, veneer, leather-splitting and other straight knives. It is manufactured by the S. A. Woods Machine Company, Boston, Mass., for whom The Fairbanks Company, Montreal, Que., are Canadian sales agents. This new automatic knife grinder contains several characteristic features:

The feed.—The wheel stand is accurately gibbed to the base and is automatically fed to the work at each passage of the carriage. The amount to be ground is determined by a graduated index, which can be set, to automatically

and suitable gibbing is provided for taking up any wear that may occur.

The knife bar.—The knife bar is held at either end by rigid supports, between which the bar is firmly clamped when in grinding position. Suitable T slots are provided for bolting on the knives and for locating the gauges that insure grinding the knife parallel. The knife may be placed on this bar to grind either against or away from the cutting edge.

The pump.—A steady supply of water is fed to the work by a hydro-pneumatic pump. No working parts come in direct contact with the water, and unnecessary wear is thus obviated. Provision is made for thorough drainage and return of all water to the tank.

with gauges which are supplied; owing to the automatic nature and simplicity of the machine the services of a skilled operator are not required. The Fairbanks Company will be glad to supply any further information to intending purchasers or interested parties.

Scheme for the Encouragement of Apprentices.

IN order to encourage promptness and technical study among their apprentices the firm of George Clark, Ltd., Sunderland, have adopted a system of giving marks, which went into force last month. The marks are to be apportioned as follows:

(a) For good time-keeping, maximum 60 marks, 1 mark will be deducted for every three hours lost time. No marks will be deducted when an apprentice is absent with leave, or when a certificate is produced from some responsible person proving illness.

(b) For progress and general ability in the shops, 60 marks maximum. These marks will be awarded in accordance with reports forwarded by the foreman.

(c) For each approved science and art examination in engineering subjects, marks will be awarded according to the following scale:

Honor Stage,	1st. Class,	80 marks
	2nd. "	60 "
Stage Three,	1st. "	50 "
"	2nd. "	40 "
Stage Two,	1st. "	25 "
"	2nd. "	15 "
Stage One,	1st. "	10 "
"	2nd. "	5 "

(c, 2) Should the apprentice be attending the technical college, marks for position in class lists at the local examination (evening classes) will be awarded as follows:

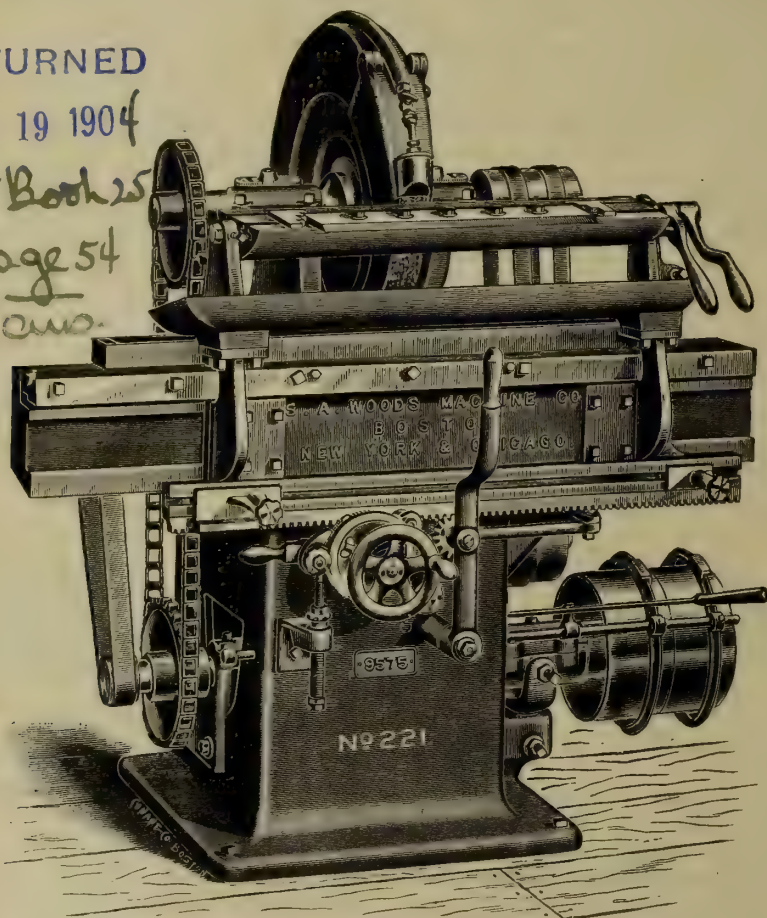
1st. Class in and D Class,	100 marks, maximum
2nd. " " D "	80 " "
3rd. " " D "	60 " "
1st. " " C "	60 " "
2nd. " " C "	45 " "
3rd. " " C "	30 " "
1st. " " B "	30 " "
2nd. " " B "	20 " "
3rd. " " B "	10 " "

For first class in A, college class, or in local instruction, such as Y.M.C.A., when examination is held under superiors, 10 marks, and for second class ditto, 5 marks. The marks in (c, 2) are the maximum obtained for these examinations, and include an allowance for regularity of attendance and home work, consequently full marks can only be obtained in this section by success in home work and good attendance, as well as success at the examinations. Group of students advanced and honor students are advised to take complete

RETURNED

OCT 19 1904

Cut Book 25
Page 54
CWS



Automatic Knife Grinder.

stop the feed when a predetermined amount has been removed. The amount of feed per stroke can be varied from one four-thousandth of an inch up to any desired quantity.

The carriage.—The travel of the carriage is automatic in either direction, and is controlled by adjustable dogs which throw the reversing lever.

The bed.—Patented dust-proof ways are contained in the extended bed of the machine, whereby absolute protection is afforded the sliding surfaces of the carriage against dust or particles of emery,

Among the several points of advantage that this grinder has above those of competitive makes the following may be mentioned: Grinds straight knives of any kind, small or large, up to its capacity; the knife is kept cool by a liberal supply of water and will not burn; an improved hood, adjustable to conform to wear of wheel, prevents escape of water; the automatic cross feed of the wheel prevents waste from over-grinding; any desired bevel may be ground and duplicated by using the graduated segment on the knife bar in connection

groups of five subjects, all in the same grade. Those students who are successful in passing these groups of subjects will receive a bonus of 50 marks.

Iron and Steel Institute's Trip.

THE American meeting of the Iron and Steel Institute at New York on Monday, 24th inst., and Wednesday, 26th, is likely to prove of exceptional interest. Secretary Bennett H. Brough, London, Eng., has furnished the programme as follows:

The following papers have been offered for reading: "Iron and Steel at the St. Louis Exposition," by Professor H. Bauerman, member of the International Jury; "A West African Smelting House," by C. V. Bellamy, Director of Public Works, Lagos, with an appendix by F. W. Harbord; "The Influence of Carbon and Phosphorus Upon the Strength of Iron and Steel," by H. H. Campbell, Steelton, Pa.; "The Rateau Low Pressure Turbine at Steel Works and Collieries," by E. Demenge, Paris; "A Dry Air Blast Apparatus," by James Gayley, president of the American Institute of Mining Engineers, New York; "High Speed Tool Steels," by J. M. Gledhill, Manchester; "The Determination of Carbon and Phosphorus in Steel," by Baron H. Juptner von Jonstorff, Vienna; Andrew A. Blair, Philadelphia; Gunnar Dillner, Stockholm, and J. E. Stead, Middlesborough; "Acid Open Hearth Manipulation," by Andrew McWilliam and W. H. Hatfield, Sheffield; "A Power Gas Plant for Johannesburg," by P. J. Mallmann, London.

The headquarters of the meeting will be at the Hotel Astor, 44th street and Broadway, New York.

A reception committee to entertain visiting members has been organized in New York with James A. Burden as chairman, and Dr. R. G. Moldenke as secretary. This committee has arranged for optional excursions on Monday to universities, subway, bridges, industrial establishments, the navy yard and other places of interest.

At the annual general meeting on Monday evening Andrew Carnegie will be presented with the Bessemer gold medal in recognition of his great services to the iron and steel trades of the world. This meeting will be followed by a reception.

The daylight hours of October 25 will be devoted to an excursion up the Hudson River on a specially chartered Albany boat, stopping at West Point, where the United States Military Academy is situated.

In the morning and afternoon of October 26 there will be two meetings of the institute, when a selection of papers will be read and discussed. In the evening the institute will entertain the re-

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S MOKESTACK WANTED—40 or 50 feet of 24-inch stack; new or second-hand; in first-class condition; also small lath machine. Box 80, Providence Bay, Ont.

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WANTED—Second-hand duplex pump; about 10 x 6 x 12; state particulars by letter. John E. Russell, 908 Queen street east, Toronto.

WANTED—Second-hand Gasoline Engine. 15 h.p., with 3½ in. pulley. Must be in good repair and cheap. James Leach, Eden, Ont.

WANTED—10 h.p. Motor of 110 volts. State how long in use and lowest price. Address P.O. Box 378, Winnipeg.

WANTED—To purchase at once for cash, small second-hand Gasoline Engine, 4 h.p., full outfit. Apply R. Gillespie, Norwood, Ont.

WANTED—Good second hand pair tinner's squaring shears, either 24 or 30 in. cut, state make, how long used, condition and price. Bennett & Son, Gananoque.

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ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

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SECOND-HAND saw-mill machinery for sale. Buyers are requested to write regarding the below to **W. H. COWELL, HARDWARE AND METAL**, 10 Front St. East, Toronto.

1 Waterous Side Crank Engine, cylinders 12 x 14 in.; 4½ in. shaft.

1 Fly Wheel Pulley, 18-in. face, 6-in. dia.; 1 Driving Pulley, 12-in. face, 36-in. dia.; 1 Driving Pulley, 8-in. face, 26-in. dia., bore 5½ in.; bore bushed to 4¾ attached, out-board bearing.

1 Return Tubular Boiler, 52-in. dia., 14 ft. long, 52 8½-in. tubes.

1 Shaft, 2-in. dia., 9 ft. long; 1 pulley, 5½-in. face, 6-in. dia., wood; 1 pulley, 6½-in. face, 10¾-in. dia., iron attached, 2 bearings.

1 Shaft, 2-in. dia., 37 in. long; 1 Pulley, 5½ x 24 in.; 1 Pulley, 6½ x 10½ in., attached, two bearings.

1 Shaft, 2½ in. x 15 ft. 10 in.; 1 Cone Friction Pulley, wood, 10 in. thick, 13½ in. small dia., 32 in. large dia.; 1 Pulley, 11 x 30 in., wood; 1 Pulley, 4 x 10 in., wood; 1 Pulley, 7 x 48 in., iron attached, 3 bearings.

1 Shaft, 2¼ in. x 7 ft. 11 in.; 1 Cone Friction Pulley, iron, 7½ in. thick, 14 in. small dia., 28½ in. large dia.; 1 Pulley, 10 x 24 in., iron attached, 2 bearings; 1 Eccentric, for throwing frictions in and out of gear.

1 Shaft, 1½ in. x 9 ft.; 1 Friction Pulley, 8 x 10 in., winding wood drum, 6 in. x 4 ft. 6 in., 4 in. flanges, attached, 2 bearings.

1 Shaft, 1½ in. x 5 ft.; 1 wood pulley, 10 x 76 in., 2 bearings attached.

1 Belt Tightener Pulley, 16 x 20 in., in swinging frame, 1¼-in. shaft, 2 bearings.

1 Shaft, 2¼ in. x 9 ft.; 1 drum, 10 in. x 3 ft. 7 in., 12½ in. flanges; 1 pulley, 7 in. x 45 in., wood, 2 bearings attached.

1 Rogers Pat. Emery Wheel, saw sharpening machine, manufactured by Hart Emery Wheel Company, Hamilton, Ont., takes 84-in. saw; counter shaft and pulleys for same.

1 Piece of Shafting, 4¾ in. x 10 ft. 2 in.

1 14-in. Edging Saw.

1 49-in. Circular Saw.

1 52-in. " "

1 60-in. " " inset teeth.

1 28-in. Slab Saw on arbor and frame.

9 Slab Rollers, iron, 20 x 10 in. dia. in bearings, 2-in. shafts.

1 Edging Table, 15 ft. long x 17½ in. wide, on iron wheels, and bed with iron rails, 32 ft. long.

1 ¾-in. Saw Arbor, in frame, also friction pulleys, levers and gear for operating log carriage, complete.

1 Log Carriage Rack, driven on iron rails, complete.

1 Pulley, 6 x 18 in., 2-in. bore.

1 Paper Pulley, 6-in. face, 11½ in. dia., 13 in. dia. over flanges, 2-in. bore.

46 ft. of new Main Belting Co.'s Leviathan Belt, 14 in. wide, ½ in. thick.

Also a lot of second-hand belting, some of which is in fair condition. The machinery is in good condition. There is no smoke stack. Boiler front and grates in good condition; boiler in brick setting. Write regarding above to **W. H. COWELL, HARDWARE AND METAL**, Toronto.

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ception committee at dinner at the Waldorf-Astoria.

Arrangements have been made for visits to Philadelphia, Washington, Pittsburg, Cleveland, Buffalo, and for a limited mission to St. Louis and Chicago.

For the reception of the institute during its stay in America an influential committee has been formed, John Fritz, Bessemer gold medalist of the Iron and Steel Institute, being the president; Charles Kirchhoff, the chairman of the executive committee; Robert E. Jennings, treasurer, and Theodore Dwight, secretary.

World's Coal Statistics.

United States Consul Mahen, stationed at Nottingham, Eng., has forwarded a copy of a parliamentary paper giving detailed information regarding the production, consumption and prices of coal during the past three years. The yield of the five principal coal-producing countries is stated as follows:

Country.	1901.	Tons* 1902.	1903.
United Kingdom.	219,047,000	227,095,000	230,334,000
Germany.....	18,539,000	107,474,000	116,638,000
France.....	31,634,000	29,365,000	34,318,000
Belgium.....	22,213,000	22,877,000	23,912,000
United States....	261,374,000	269,277,000	320,983,000

*The English and American tons contain 2,240 pounds; the German, French and Belgian tons 2,204 pounds. The German, French and Belgian figures for 1903 are provisional.

Prices—The average price per ton showed great variation, being in 1902, in the United Kingdom, \$2; in Germany, \$2.15; in France, \$2.85; in Belgium, \$2.57, and in the United States, \$1.38. These figures it is explained, represent a fall of about 28 cents a ton in the United Kingdom, 12 cents in Germany, 22 cents in France, 40 cents in Belgium, but an increase of 4 cents in the United States. Semi-official figures for 1903 indicate a further fall of 14 cents a ton in the United Kingdom and 6 cents in Germany, with a further rise of 20 cents in the United States. France and Belgium are not mentioned.

The consumption of coal in several of the principal countries is given as follows:

Country.	1902.	Tons 1903.
United States.....	265,694,000	316,029,000
United Kingdom.....	186,668,000	166,532,000
Germany.....	95,363,000	*103,114,000
France.....	41,989,000	*46,560,000
Russia.....	18,762,000	*18,374,000
Belgium.....	19,799,000	*21,432,000
Austria-Hungary.....	17,595,000	Not available

*Provisional figures.

Consumption—The consumption of coal per head of the population in the

various countries mentioned for 1903 was as follows: United Kingdom, 3.93 tons; United States, 3.93 tons; Belgium, 3.07 tons; Germany, 1.75 tons; France, 1.19 tons; Russia, 0.13 ton.

Locomotive coal consumption in the United Kingdom—For locomotive purposes last year England consumed 9,251,563 tons, Scotland, 1,790,758 tons, and Ireland 357,092 tons.

British Export—The export of coal, coke, and patent fuel from the United Kingdom amounted to 46,622,700 tons in 1903; about 3,000 tons of foreign coal were consumed in the Kingdom during the same year.

Trouble in the Cramp Steel Co.

SHAREHOLDERS of the original Cramp Steel Company have asked for an injunction to restrain J. A. Currie, E. H. Currie, B. S. Anderson and others associated with them from transferring the property of the plaintiffs to the Northern Iron & Steel Company, also for an injunction restraining proposed reorganization of the company. Among other allegations defendants are charged with fraudulently placing in their own names 10,000 shares of the par value of \$100 each of preference stock, and 20,000 shares of common stock, obtaining in this way the controlling vote in the company, and the election of themselves as officers. J. A. Currie is accused of using the funds of the company to make improper payments to himself, and incurring large liabilities for his own interest. The incorporation of the Northern Iron & Steel Co. is said to be a scheme to shut out the bona fide shareholders.—News, Oct. 7.

Contract for Power Plant.

A NEW YORK despatch says the Huronian Co., formed by the directorate of the International Nickel Co., Wall street Exchange Building, New York, for the purpose of operating extensive power transmission system between Turbine, Ont., and the works of the Canadian Copper Co., at Copper Cliff, have awarded the contract for the power plant. The Crocker-Wheeler Company, of Ampere, N.J., New York offices Taylor Building, 39-41 Cortlandt street, secured the contract which calls for two 2,000 kilowatt alternating current generators of Brown-Bouverie type. These machines will be direct connected to 3,500 horse-power water turbines, which have, however, not yet been contracted for. Power will be

derived from High Falls, on the Spanish River, which are capable of developing about 15,000 horse-power. The transmission line will be about 30 miles long. The Canadian Copper Company's electric plant is at present operated by steam, which power will be held in reserve as soon as the new system is in operation. Contracts are also about to be placed for a number of big motors, including one of 700 horse-power, for driving compressors, etc. Electricity generated at the Huronian plant will be utilized for the purpose of operating the mines and smelters at Copper Cliff. The consulting engineers of the Huronian Company are Ross & Holgate, of Montreal. The contracts for equipment, etc., are being placed by David T. Trainor, the purchasing agent of the International Company.

Fairbanks' New Warehouse.

THE Fairbanks Co. have completed arrangements for the erection of a six storey warehouse, 125x41 feet, on Front street, Toronto, on that part of the burned area almost immediately west of the Minerva building. It is to be a brick and stone structure and will be fitted with all modern appliances for prompt handling of goods. A fire sprinkler system will be installed and other precautions taken to guard against fire loss. The plans have been prepared by Beaumont Jarvis, architect, Toronto, and construction work will be started at once, the desire being to have the building ready for operation by May next.

In the meantime the Toronto offices of the Fairbanks Co. have been removed from Bay street to 100 King street west, where a compact suite of offices on the ground floor provides accommodation for the firm's steadily increasing office staff in Toronto.

Will Put up \$2,500,000 Plant.

Wilson H. Butler, of New York, vice-president of the Simplex Railway Appliance Co., states that his company has decided to erect a \$2,500,000 factory in Canada. "The plant that we will erect," says Mr. Butler, "will include the following: A bolster and brake beam shop, which will be 410 feet long and alone will cost \$80,000; a steel car shop that will be over 700 feet in length; a machine and blacksmith shop, a truck shop, a paint shop, an erecting shop, a saw and planing mill, an engine and power house, a foundry, a stores department."

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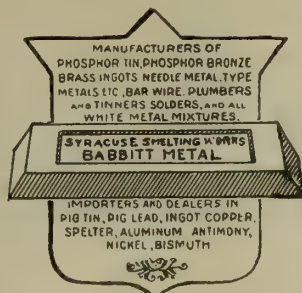
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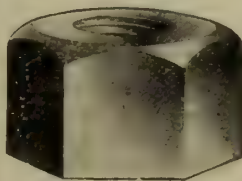
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Selling Files in Canada.

Mayer & Co., Philadelphia, Pa., manufacturers of Gold Medal Files, advise us that there has been a material gain in the volume of business during the past month, and the nature of the inquiries received indicates a still further improvement in the near future. These parties have recently established a Canadian branch in Montreal, Canada, and say that export business has improved considerably. Besides the general line of files, Mayer & Co. will shortly engage in the manufacture of a line of manicure files for the trade.—Iron Age.

Machinery and Electrical Notes.

The Ogilvie Flour Mills Co. are erecting a new grist mill at Fort William, to cost \$200,000.

The Mickle-Dyment & Son Lumber Co., Brantford, Ont., have purchased a vacant lot and will enlarge their plant.

The Grand Trunk Railway intend to erect additional shops in Point St. Charles, Montreal, to accommodate the increased work.

Tenders are invited before November 7 by Fred. Gelinis, secretary Department of Public Works, for a new armory at Virden, Man.

The J. I. Case Mfg. Co. have secured a \$10,000 lot in Fort William, Ont., and it is understood they will erect a plant there to employ at least 400 men.

A Pictou, N. S., despatch says that the works at that place of the Copper Crown Mining Co., Halifax, has passed into new hands, who will put them into condition for treating copper and other ores.

Otis Staples, Stillwater, Minn., is erecting a \$400,000 lumber mill at Staples, not far from Cranbrook, B.C., on the Crow's Nest line. Mr. Staples has bought timber limits to supply his mill.

It is understood in Hamilton that the McClary Mfg. Co., London, intend removing their works at Hamilton to London, but the McClary Co. are not willing to make a statement regarding the matter.

The plant and equipment of the Haines Carriage Works and Planing Mill, Bowmanville, Ont., are offered for sale. The following are included: Warehouse, factory, blacksmith shop, planing mill, engine and boiler rooms, engines, pumps, heaters, etc.

Dr. J. M. Bell, who has made an exploitation of the Michipicota mining division during the present season, has reported to the Bureau of Mines that he found the iron ore ranges to be much more extensive than had been supposed, and also that he had discovered additional areas.

R. P. Morrison, box 419, Sydney, N. S., invites tenders for buildings and ma-

chinery of the Sydney Mfg. Co., Limited. The plant, which is designed for wood-working, is four years old. The machinery will be sold separate from the land and buildings, but the engine and boiler must be sold with the latter.

A Belleville despatch says that the Iron & Steel Co. of Canada, whose property at the rolling mills was seized for taxes, have issued a writ asking an injunction to restrain the city from selling and for unstated damages for interference with their business. Treasurer Price says the coal and scrap iron have been released.

The Canadian agency for the Campbell Gas Engine Co., Limited, Halifax, England, has been secured by Weyland Williams, Board of Trade Building, Montreal. This firm manufactures not only a grade of high-class gas engines but complete gas plants as well, the cost of operating which is low compared with steam or electricity.

The works of the Manitoba Gypsum Co., Gypsumville, Lake Manitoba are to be enlarged. The capacity is now 200 tons per week, and when the new equipment is installed the capacity is to be 400 tons per week. The officers of this company are: President, B. C. Mason, Kansas City; vice-president, Wm. Martin, Winnipeg; secretary-treasurer, Hon. Hugh Sutherland, Winnipeg.

The Marine and Fisheries Department, Ottawa, are investigating asbestos as a possible material for the construction of movable lighthouses.

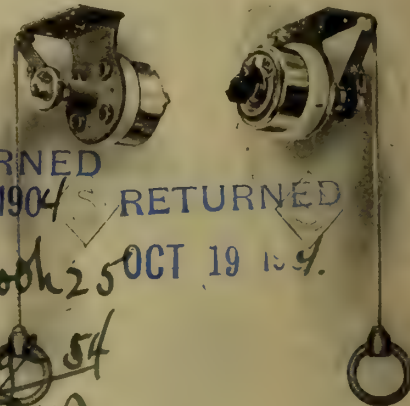
On Tuesday the Railway Commission gave out a judgment of interest to all manufacturers. The Grand Trunk had applied for permission to haul coal to certain Cobourg manufacturers at 80c a ton, while charging other consumers 90c. The allegation was that the manufacturers needed the cut rate to continue business. The court decided against the application. Mr. Blair remarked that there had been no evidence that the manufacturers would be injured by the 90c rate, but they had threatened to bring their coal by water unless the railway gave them the 80c rate.

Sir Thomas Shaughnessy is credited with the following statement regarding the conditions in the mining districts of British Columbia: They are in a healthier state than at any time during the history of British Columbia. There are no big propositions that are making a heap of money, but there are a great number of smaller ones that are paying well. I was told on competent authority that there were fifty-three different properties that were shipping ore to the Trail smelter. There is an excellent future before the mining industry in the Western Province. The day of the promoter and the mining speculator is past. Business is being conducted along better commercial lines.

Electrical Goods.

Ceiling Switch.

THE ceiling switch illustrated on this page is manufactured by P. Sorensen, Brooklyn, N.Y., and will find a wide application on account of the ease of its operation. As will be seen the switch rod is extended through the back of the switch case and a ratchet and pawl placed upon the end. To the



pawl lever is attached a cord which hangs down within easy reach for the operation of the switch from the floor. One pull of the cord closes the switch and the next pull opens it. This switch has received the approval of the fire underwriters.

The Telephone Paradox.

THE telephone paradox, which is, "that the cost of telephone service for subscribers, instead of decreasing with an added volume of business, increases at a faster rate than the increase of subscribers," is explained by a writer in the New York Times, as follows:

"The switch-board of the exchange is built in sections, each of which contains on an average the terminals of the line of 200 incoming subscribers. These terminals are called jacks, and the panel containing them is called the answering panel. In addition to the 200 incoming jacks, each section must contain the outgoing jacks of each subscriber on the exchange. This is necessary in order that the operator in each section may be able to connect any of the incoming subscribers in a section, with any other subscribers in the exchange. The panel containing the outgoing jacks is called the multiple panel. On the above basis the switch-board in an exchange of 2,000 subscribers, would contain ten sections, that of a 5,000 exchange, 25 sections, and

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that of a 10,000 exchange, 50 sections, consequently each section in the exchange of such capacity would contain 2,200 jacks, 5,200 jacks, and 10,200 jacks. The total number of jacks in a 2,000 exchange is therefore 22,000. The average mind would at once arrive at the conclusion that the total number of jacks in a 5,000 switch-board would be two and a half times that of a 2,000. A 5,000 capacity switch-board would, however, contain 25 sections of 5,200 jacks each, or a total of 130,000, while a 10,000 capacity switch-board with its 50 sections of 10,200 jacks each, would contain 510,000 jacks. For sake of argument say that each jack with its connections and labor, represents the cost of \$1. Each new subscriber added to a 2,000 exchange has to be multiplied into ten sections, necessitating ten jacks, but each new subscriber added to a 5,000 exchange has to be multiplied into 25 sections, requiring 25 jacks, while each new subscribers added to a 10,000 exchange has to be multiplied into 50 sections, requiring 50 jacks. Now as to the number of 'hello' girls necessary to operate exchanges of the same size. While one operator can take care of each section of a 2,000 capacity, a larger exchange requires three or more operators per section, besides assistants, relieve operators and monitors. It is therefore evident that a company starting out with 2,000 subscribers, on a basis of say \$50 per year for service, makes less profit on each 200 subscribers added, and such is the decrease in the profit as the exchange mounts up to 5,000 or 10,000 that the company must either increase its rates or quit.

"One of the most interesting exhibits at the St. Louis Exhibition, is that of a German named Faller, who has succeeded in eliminating the multiple feature, not only from automatic, but from present manual practice. So great is the saving affected by this elimination of the bugaboo of telephony that we may in the near future, look for not only much lower rates, but also, what is almost as much to be desired, infinitely better service."

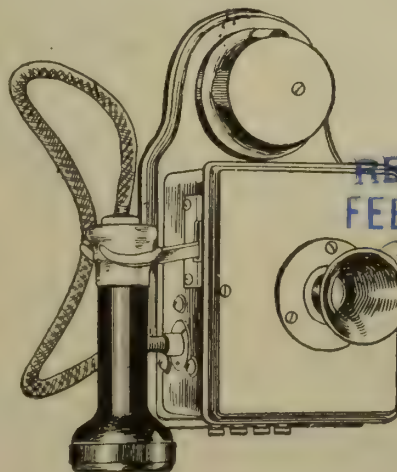
Arc Lamps Compared.

IN a paper read by W. L. McFarlane, before the Canadian Electrical Association, a comparison of the operation and cost of alternating and direct current arc lamps is given.

Constant current series lamps either direct or alternating give the best commercial satisfaction, when they are of the differential rather than shut type. The direct current lamps are either open or enclosed. Open lamps cost about 15 per cent less than the enclosed, and owing to the E.M.F. of the former being about 50 volts, as compared to 72 in the latter. The enclosed direct current lamp is much more reliable than the open lamp, the maintenance of the lamps being reduced about 50 per cent. The enclosed A. C. series lamp, as far as reliability of service is concerned, compares favorably with the enclosed D.C. lamp; the cost of the lamp and the maintenance is slightly more, however, as there seems to be a greater tendency for the insulation of the A.C. lamp to become punctured. In a comparison giving the approximate annual line cost for different arc lamps the ratio of open D. C. lamps to enclosed D. C. lamps, to enclosed A. C. lamps is as 95 to 52.9 to

58.4. The maximum candle power of the open arc is higher than that of the enclosed arc, but the light is not so steady, owing to the more frequent feeding of the carbon their poorer quality and the action of the wind on the arc. In the enclosed arc, the wandering of the arc is the main cause of what variation there is in the light, but by the use of an open inner globe, these variations are greatly reduced. A comparison of the light given by the two enclosed arcs, namely the direct current and the alternating current lamps will show that the former gives slightly more light at all points than the alternating lamp, although the alternating lamp gives more light than the open direct current lamp, midway between lamps. It is claimed that the difference in the light at say 150 feet from the lamp, between the D.C. and the A.C. enclosed lamp, is nearly if not quite compensated for on account of the more subdued light in the vicinity of the A. C. lamp, increasing the relative effect of the light at a distance by reduced contrast.

In a comparison giving complete cost, showing the relation between the D.C. and A.C. enclosed lamps, shows the saving of \$6.24 per lamp, in favor of the A.C. system.



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Orders for new connections, changes of Firm names or addresses should be sent in before the 1st of October to insure their appearance in this book.

K. J. DUNSTAN,

Toronto, Sept. 15th, 1904.

LOCAL MANAGER.

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DEVOTED TO THE
OFFICE STAFFS OF
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ESTABLISHMENTS

TO THE OFFICE EMPLOYEE.

From the Business World.

IF you work for another, your own best interests are served by trying to put yourself in the place of the man who employs you—not too literally, of course. To achieve any great success for yourself you must do something for him. Get into a position that permits you to have his viewpoint. See things with his eyes. Think of them as he does. Let the day's affairs come before your eyes as they come before his. Reach out ahead for new things, and handle those at your side now, from a policy which you see is the policy of the house; with the same purpose and end as that which animates its head.

"It won't matter a bit how smart you are, how gifted, how able, how strong—unless your gifts and strength and abilities are exerted in harmony with the efforts which your concern, as a whole, exert.

"You are 'in the same boat' as the firm for whom you work. If you would help them (and thus only can you help yourself!) you must pull on your oar so as to fall into stroke with the others sitting near you. Otherwise what? Well, otherwise your strength will either be wasted or it will serve to stop the boat's headway. Remember you are not sculling, but rowing; and yours is but one of many oars. The old song says: 'A long pull, a strong pull, and a pull all together.' The long, strong pull were better omitted unless the rowers pull all together.

"Occasionally there is a little business started where one man is the whole thing. He can stand in the stern of his diminutive craft and scull his boat where he will. Progress means his strength, his judgment, his knowledge of the way. But as business grows and increases, this method must be exchanged for one yielding greater power of propulsion.

"Now he calls in others. Now his progress depends on unity of action on the part of all those who are working together for his good. If you are in his boat keep your eye on the same light he does; adopt the same rhythm of stroke, pull at the same time, in the same way, and for all you're worth. Work hard and faithfully for him. Forget yourself and struggle toward his harbor by harmonious means. If you get him there, you must, yourself, get there."

THE DRAFT SYSTEM.

H.R.W.

A SHORT time ago an article appeared on this page by "A. B. C." on the inconvenience to the retailer of settling accounts by draft. Mr. "A. B. C." states that if the retailer failed to meet an acceptance through miscarriage of the mails, the draft would be protested, thus proving expensive and also injurious to his credit. It might be said in answer to this that the majority of houses doing business with drafts have the "no protest" slip attached to draft, and a draft is rarely protested unless specially instructed or to hold an endorser. Mr. "A. B. C." also states that the retailer cannot always call in his money just as he wants it. This is also true of the wholesale merchant, in fact, he

is very often requested to grant extensions on lines for which he has paid spot cash, and although working on a larger capital finds it difficult to finance a large business at certain seasons of the year. Banks in Canada are opening up branches all through the country to such an extent that there are few towns which cannot be reached by draft.

If the retailer will look reasonably on this draft system, he will without doubt agree that the wholesaler could not conduct his business successfully unless some such method were adopted. We will say for example, that the wholesale house has some eight or ten thousand accounts on the books, of these about six thousand being out of town accounts. If no practical, systematic method of collection were adopted, it would be impossible to look after such a large number of accounts. No wholesale merchant prefers to make drafts and pay exchange, provided remittance is received for the account either by postoffice order or express order, but the difficulty is that the retailer does not remit within the time in which cash discount may be allowed, but sometimes thirty days after, and still deducts cash discount, and the wholesaler is obliged to give special attention to the individual account, necessitating thereby a very large and expensive office staff.

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The Quita, although a cheap range, has all the strong points of our better lines.

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No.	Cooking Holes	Size of Oven, Ins.	Length of Wood Fire Box, Ins.	Shipping Weight, lbs.		Sq.	Tel. Code	Ext.
				Sq.	Reser.			
9	4 9-in.	16x21	21	240	250	Canoe		Camlet

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DEBASING THE BENCH.

A PROPOS of our recent article disapproving of the connection of Judge Britton with the Alberta Central Land Corporation, Limited, the attention of our readers may be drawn to a case which illustrates the dangers which arise from judges being connected with similar concerns.

The case in point is this: A member of the Ontario judiciary was induced to allow his name to be connected with the directorate of a new financial company. As an honorarium for this he was given shares to the value of \$5,000. Bye-and-bye the company failed. The assets in evidence not being sufficient to liquidate the liabilities the creditors naturally investigated, the result of which was the discovery that the judge in question had not paid a dollar for his shares. Being of opinion that he should have paid for them, they brought suit to recover the

\$5,000 they represented at the formation of the company.

And here is where the interesting phase of the case comes in. The presiding judge should have been the defendant himself. But while he could not try his own case, he did the next best thing he could; he argued his own case.

Someone has said that an independent judiciary is the firmest bulwark of freedom. If judges are to become part and parcel of public corporations they can scarcely be expected to be independent and single for the public interest in the hour of temptation.

Undoubtedly the low salaries which judges in Canada receive cause some of them to turn aside from the strict path in which they should walk in order to supplement a revenue which is not in keeping with the dignity and importance of their high office. The duty of the State is to remove the cause.

AN APPRECIATION.

BUSINESS men will learn with regret that Mr. W. R. Brock, of the W. R. Brock Co., wholesale dry goods merchants, Toronto, has decided not to allow his name to stand for re-election in the riding of Centre Toronto.

Mr. Brock proved a worthy representative of his constituency in the last Dominion Parliament, but, apart from this fact, he represents one of the largest business interests in Canada, and Hardware and Metal has always taken the stand that legislation of a country should be in the hands of those most immediately affected thereby, namely, its business men. The last Dominion Parliament was an improvement in this respect, although the representation of business men was altogether too small to be as effective as might be desired.

THE TRADE STAMP SYSTEM

BY the judgments handed down in the cases brought against the company conducting a "premium exchange" and a retail merchant who had been giving their premiums, the trade stamp is once more declared illegal in Toronto as well as wrong in principle anywhere.

The charge was made by the Toronto Retail Grocers' Association and the

Retail Merchants' Association against the premium company that they violated the trading stamp by-law, and a nominal fine was inflicted by the magistrate. A retailer was also brought into the police court for using premium exchange coupons, and convicted likewise. During the past week an appeal from the latter decision was made with the result that the judge in chambers reaffirmed the decision of the magistrate to the effect that it is contrary to the existing by-law for a retailer to traffic in trading coupons.

USE YOUR LARGE COMPETITORS.

SMALL retailers are continually commenting on the inroads of the city departmental stores upon their legitimate trade. Some retailers have not faced the problem, but have gone on in the old rut, carefully watching the fellow across the street, ignoring the neighboring town or village, sitting quietly by and watching express parcels come down the street, sometimes emitting a futile howl, but not taking the initiative to prevent it.

Undoubtedly the consumer is the person to be got at, and it must be clearly proven to him that his own best interests are served by spending his ready cash at home. Many and varied are the means devised, and there is undoubtedly some virtue in each. We do not propose to solve the problem, but we wish to call attention to a phase of the situation which is only too apparent.

We refer to the diffidence expressed by retailers, when in large centres, to visiting and studying the methods of the large departmental stores. Many are the excuses offered. Some ignore these stores through petty jealousy and foolish rivalry; others consider it useless to spend their valuable time, owing to a limited stay, in seeing what they consider is altogether beyond their sphere, and utterly useless as applied to them. In this connection we take issue with the retailer. While agreeing with him that the multiplicity of departments and intricacies of store management are entirely out of his scope, yet there are lessons to be learned by a walk through one of these stores. If he labors under the impression that his particular trade

does not want a neat, up-to-date store, let him be sure to be the first to inaugurate these things or perhaps he may regret it too late. It is generally a hard problem to get a store too good for a town. In most cases such an one usually takes the legitimate business of some neighboring town or village as well as the best part of its own.

It is easily apparent that the system, order and neatness displayed by large concerns will wake up the retailer to many weak spots, which were formerly ignored. Perhaps he will return with the impression that his windows might be used for display purposes, and with the realization that they are his best and cheapest advertisements. Or he may be imbued with the idea that a more careful supervision of his stock would not be amiss, not counting the many little improvements at a slight cost which mean wonders in the general appearance of his store.

By all means the local paper should be informed as to what is being done. The dealer will find the paper quite ready to co-operate in giving him a place in its news columns. All this tends to discourage foreign dealing. It will soon be found that the catalogue will be used as a last resort—the local merchant will get the preference.

NOTICE THE CHILDREN.

IN any retail business the personal element wields such influence that the merchant should be constantly on the alert to win confidence and sympathy. Unless the merchant has the confidence of his customers he is ever in danger of losing them, whereas if they are his friends they are likely to continue his customers.

To win confidence in any neighborhood one cannot afford to neglect the children in the slightest degree. If a child and a gentleman come into the store together it is a safe rule to wait on the child first, engaging the adult customer in conversation at the same time. In no case should a child be left until a later arrival is first served. Each child is a good friend to win and as children are more sensitive in every way than older persons, their friendship is more easily won or lost than that of the adult customers. Above all, never neglect them.

A RECENT issue of the Halifax Herald contains an article on the subject of Nova Scotia coal, which is of particular interest in view of the movement which is being made for a reciprocal arrangement between Canada and the United States in regard to coal.

The Herald rejects the idea "that there is any considerable market in Europe, West Indies or South America" for Nova Scotia coal, but points out that a larger market must be obtained if the output of the Nova Scotia mines is to be increased.

At present the geographical limits of the home market do not extend farther west than Montreal, although within the last few months a few small lots have reached Smith's Falls. Within that market there is a population of approximately 2,000,000 people. As the population therein has increased in a smaller ratio than the output of the Nova Scotia coal mines it is urged by our contemporary that there must eventually be a glut in the market.

"The question," it says, "is a serious one to the localities concerned and the province; it is also serious to the stock and bondholders abroad. A stationary business is only one step from loss of values and decay. We assume that most of the coal propositions are capitalized on the basis of a developing output—of increasing business and augmented earnings. What becomes of this assumption, when the available market is glutted?"

While directly the Herald does not propose a remedy, it does not require a very close analysis of its article to discover wherein it considers it to be.

In a word our contemporary would have the tariff raised to a point where it would practically compel manufacturers west of Montreal to use Nova Scotia instead of the Pennsylvania and Virginia product.

The manufacturers and the railways in Ontario and other points in Western Canada while concerned in the welfare and prosperity of the Nova Scotia mining industry will certainly not look with favor upon any proposal to increase the present duty on bituminous coal. Their natural sources of supply are Pennsylvania and Virginia, approxi-

mately 800 miles nearer than the coal fields of Nova Scotia. Already they are taxed nearly \$2,000,000 a year because of the 53c a ton duty now imposed on coal from their natural source of supply plus a freight rate of about \$1.85 a ton.

But after all it would be practically idle to talk of increasing the duty with the object of compelling the transportation companies and the manufacturers in Western Canada to buy their coal in Nova Scotia. Nothing but an absurdly high duty could compel them to do this. The burden that the existing duty imposes on the users of bituminous coal west of Montreal is already grievous. Why, therefore, make it more so?

The remedy is not to be found in increasing the customs duty on coal. It is in a reciprocal arrangement between Canada and the United States, whereby the Nova Scotia mines will have access to their natural market in the New England States, and the manufacturers and the transportation companies in Western Canada will be able to draw upon their natural source of supply without being handicapped, as they are under existing conditions.

Such an arrangement would not impair the home market embraced within Montreal and the eastern provinces. That market is just as much beyond the sphere of the bituminous coal fields of the United States as is the market in Western Canada beyond the reach of the mines of Nova Scotia.

A reciprocal arrangement will be to the advantage of all concerned—to the mine owners of Nova Scotia, to the manufacturers and transportation companies in Western Canada and to the consumers in the New England States. And what is good for all is the desideratum to be sought.

THE JOHN BOWMAN COMPANY.

The John Bowman Hardware and Coal Company, London, Ont., have assigned and Jenkins & Hardy have been asked to arrange a settlement with the creditors at 60c on the dollar, secured. Jenkins & Hardy are now in charge of the company's books and a statement will be ready in a day or two. Such general sympathy has been expressed by the trade that it is likely that the matter will be satisfactorily adjusted.

PITTSBURG METAL MARKET.

From the Iron Trade Review, Oct. 13, 1904.

Pig Iron—Sales of pig iron during the week aggregated about 5,000 tons, mostly in hundred-ton, with one or two thousand-ton lots. Forge iron is firm at \$12, Pittsburg, while No. 2 foundry is now established on a basis of \$12.85. Bessemer iron continues weak, and while producers would like to secure \$12.25 at the furnace, most of the sales for future delivery are being made on the basis of \$12 at the furnace. One lot of 200 tons for prompt delivery was sold at \$11.75, and while this price can hardly be duplicated, \$12 can be shaded for immediate shipment. Large blocks of speculative Bessemer are held by brokers, most of it purchased at \$11.50 at the furnace, and they are willing to shade \$12 to dispose of their holdings. Southern iron is now quoted at \$10 Birmingham for No. 2, while one or two stacks are asking \$10.25. Most of the furnaces are sold up until the end of the year, but this advance is only possible owing to the idleness of so many stacks in that district due to the coal strike. On Oct. 1 the United States Steel Corporation had 62 of its 81 furnaces in operation, and out of a total daily capacity of 39,389 tons, 34,162 was in operation. The active capacity was thus 82 per cent. Out of a total of 192 furnaces using Lake Superior ores, 129 were in operation on the first of the month, the idle capacity being only 26 per cent. On Sept. 1 the idle capacity was 28 per cent. These furnaces are capable of 55,300 tons output a day, and the active capacity amounted to 41,174 tons. The Bessemer Furnace Association had 10 of its 16 furnaces in operation, and it is probable that the number of idle stacks will be reduced within the next three or four weeks. The Cherry Valley Iron Co. will probably blow in its rebuilt stack at Leetonia on Nov. 1, while the La Belle Iron Works is preparing to blow in its second furnace on Oct. 24. The Kittanning Iron & Steel Co. blew in its idle stack at Kittanning, Pa., this week. Last week the Carnegie Steel Co. placed another one of its idle stacks at the Edgar Thomson plant in operation, although one furnace at Mingo Junction was blown out, which offsets this increase. The Edith furnace of the American Steel & Wire Co., Allegheny, will be blown in shortly. We revise quotations as follows:

Bessemer, Valley	\$11 85 to	\$12 00
Bessemer, Pittsburg	12 70 to	12 85
No. 1 Foundry	13 00 to	13 25
No. 2 Foundry	12 70 to	12 85
Gray forge, Pittsburg	12 00 to	12 10
Chilled basic, Valley	11 75 to	11 85
Chilled basic, Pittsburg	12 60 to	12 70

Steel—Quotations on billets are again being shaded from 25 to 50c a ton, and by a few independent producers as much as 75c. Demand for billets is improving

materially and large buyers are endeavoring to cover three to six months' requirements. One local producer will not sell beyond the first of the year, and it is doubtful if any large tonnage of steel could be placed below the association quotations, although it is possible to do so on small lots for prompt delivery.

Bars—Local mills continue to receive specifications to fill up depleted stocks and the outlook is exceedingly bright. The agricultural implement manufacturers are of course taking the biggest proportion of the tonnage, although vehicle manufacturers are buying more heavily than for some time.

Pipes and Tubes—There is no improvement in merchant pipe and the time has passed for the appearance of a heavy Fall demand.

Wire and Wire Nails—While demand continues good it is not as heavy as early in September. While the Fall demand has been good the indications are that the aggregate tonnage will be below the purchases of September and October last year. Locally prices are being firmly maintained. We make the following quotations: Wire nails, jobbers' carload lots, \$1.60; retailers' carloads, \$1.65, and less than carloads, \$1.75; painted barb wire, \$1.75 to jobbers in carloads; retailers' carloads, \$1.80, and less than carloads, \$1.90, with 30c for galvanizing. Annealed smooth fence wire is held at \$1.45, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburg, 60 days, with 2 per cent. discount for cash in ten days. Iron and steel cut nails are held at \$1.65 to \$1.70.

Merchant Steel—A better demand for merchant material is reported, although the demand for shafting is not nearly great enough to keep all the mills on at more than half their capacity. We make the following quotations: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.50c to 1.55c; plow steel, 6 in. and under, 1.35c for Bessemer and open-hearth; plow slabs; $\frac{1}{4}$ in. and heavier, 1.60c. Drawn and cold rolled shafting is held at 52 per cent. off in carload lots and 47 off in less than carload lots.

Coke—The Lackawanna Steel Co. this week purchased furnace coke to cover its requirements until the end of the year amounting to 900 tons daily and this may be increased later to 1,600 tons. In addition 1,000 tons of coal daily will be purchased to supply the producers. A large amount of the independent coke supply has been cleaned up by this purchase and the market is a trifle firmer. For delivery after the first of the year producers will not contract below \$1.50 for furnace, although \$1.40 can be done for delivery to the end of the year.

Demand for foundry coke is improving and prevailing prices range from \$1.75 to \$1.85. The H. C. Frick Coke Co. is buying a large amount of coke from outside producers and it is probable that a large stock of coke will be accumulated at one of its nearby plants to guard against strikes and other contingencies. During the week ending Saturday, October 1, the production of the upper region amounted to 219,263 tons, while the output of the lower region was 61,178 tons.

AMERICAN COKE OUTPUT.

THE production of coke in America in 1903, including the production of coke from by-product or retort ovens, amounted to 22,555,000 tons, of 2,240 lbs., showing a decrease of 125,000 tons on the previous year.

Notwithstanding the somewhat smaller quantity of coke made in 1903, as compared with the preceding year, the value of the product showed a substantial gain, increasing from \$63,339,167 in 1902 to \$66,459,623 in 1903, a gain of \$3,120,456, or a little more than 5 per cent. During 1903 over 10,000 new ovens were added to those already built. At the close of 1902 the total number of coke ovens in the United States was 69,069. At the close of 1903 the number had increased to 79,187, a gain of 10,118. The number of ovens idle during 1902 was 1,945, leaving a total of 67,124 active ovens, which produced an average of 378.4 tons per oven. In 1903 the number of ovens idle throughout the year was 1,999, leaving a total of 77,188 active ovens, which turned out an average of 327.3 tons per oven.

The total number of 77,188 active ovens in 1903 included 1,956 by-product ovens. Deducting the number of by-product ovens from the total number of ovens active in 1903, it appears that there were 75,232 beehive ovens, which produced an average of 311 tons each. There were under construction at the close of 1902, 6,275 new ovens, of which 1,335, or about 21 per cent., were of the retort or by-product type.

ENGLISH TRADE ENCYCLOPEDIA.

The Autumn issue of the Ironmonger, London, Eng., is a veritable encyclopedia of the British ironmongery, metal working and engineering trades. The volume is one of the largest ever received by Hardware and Metal, its weight being slightly over 42 ounces. Not only has in quantity, however, but by virtue of the representativeness of its advertisers and the authority of its editorial utterances it has every right to the title of an encyclopedia of British trade.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Oct. 14, 1904.

Hardware.



RIDERS are coming in freely for staple goods, as well as for the usual Fall lines in which trade at the present time is very brisk. The hardware trade throughout the country are anxious to stock up fully before the close of navigation, consequently a large volume of goods is moving.

Skates and sleigh bells are experiencing a lively market, while building paper is in increasing demand. The cordage business has settled down slightly and the season is rather dull. Cement and fire brick are looking up and much better business is reported. There is a scarcity of nails this week and it is difficult to understand why prices in this line are not better maintained. The usual hardware staples continue steady and prices remain unchanged throughout.

Food Choppers—These, as mentioned last week, are still in season and a brisk trade is reported. Our quotations are as follows: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Corn Cutters and Huskers—The demand continues lively. We quote as follows: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Agricultural Wrenches—Agricultural wrenches are in somewhat lessened demand this week. We quote: 6 in., \$2.85 a dozen; 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Grindstones—The Fall season for these, which is not usually as brisk as that of the Spring, is pretty well over, although a few are still being sold. Our quotations are as follows: 40 to 200 lbs., 2 in., and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in thick and over, \$1.20; 11-2 in. thick and under 2 in., \$1.30.

Skates—Skates are one of the most active lines in the hardware trade at present. The season has opened up well and promises to be a good one. Our quotations are as follows: Halifax pat-

tern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concave, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concave, \$1.60 a pair.

Lanterns—There is a lively demand for lanterns this week. A slight suspicion of cutting in prices is reported, but we quote as before: Cold blast, \$7 a dozen; No. 0 Safety, \$4 a dozen.

Sleigh Bells—The near approach of Winter is having a stimulating effect on this market and business is very brisk. Our quotations are as follows: Brass team bells, rough, \$1.80 to \$4.50 a doz.; polished, \$2.10 to \$5 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—While the country trade has already called for large quantities of snow shovels, very few have as yet been ordered to supply city demands, this generally being left until the first snow-fall. We quote: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Washing Machines—The demand is very light. We quote: Round (three legs) \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Heavy Screw Hooks and Hinges—The volume of trade is somewhat lessened this week. Our quotations are: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—The annealed wire trade is very active. Business in this line being reported exceedingly good this week. We quote: \$2.25 per 100 lbs.

Barb Wire—The market is considerably quieter this week than for some time past. We quote as follows: \$2.75 per 100 lbs, f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Car lots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—The demand is considerably better than a week ago. There is no change in prices. Our quotations are: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 8 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—Merely a nominal trade. We quote: \$2.65 per 100 lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—The season's prices in rivets and burrs have been established. Trade is quiet. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—The business done in these has been much better this week while the supply is hardly up to the demand. Discounts are: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—The increased activity noted last week still holds. We quote as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow

bolts, 55 and 5 per cent.; black bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—There is a scarcity in wire nails at present and yet in view of this fact prices are no more being maintained than they were a month ago. We quote as follows: \$2.40 per keg in car lots, \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Cut Nails—The supply is none too large and the demand is only fair. We quote: \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Pressed Spikes—The larger volume of trade than a week ago. Discounts as before, 25 per cent.

Horse Shoes—The market continues brisk with no change whatever in prices. Our quotations are as follows: "P. B." new pattern, base price \$3.50 per 100 lbs.; iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—These continue in active demand. Our quotations on list price: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. "P. B." brand 55 and 57 1-2 per cent off list.

Shot Guns and Rifles—The season is holding out much better than was expected, although preparations were made for a large volume of trade in these lines. Rifles are particularly active just now. Prices remain the same and are to be had on application.

Ammunition—This has been a good season and continues so. No change in price is reported this week. Our quotations are as follows: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand.

Shot—The demand is still large. We quote as follows. Standard, \$6.50 per hundred lbs.; chilled, \$7 per hundred lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Roofing Pitch—All roofing materials are in good demand at the present time, roofing pitch being quite active. Price continues \$1 per cwt.

Building Paper—The volume of business in building paper is somewhat larger this week, and business is in a satisfactory condition. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—There has been a falling off in the demand for cordage recently which is hardly expected to assume any considerable proportions until Spring, this not being the active season in the cordage business. We quote as follows: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c, for 3 and 4-ply bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement and Firebrick—A fair amount of business has been reported in these lines. Each week sees large quantities arriving by incoming boats to complete the Winter stocks. One firm received nearly 200,000 firebricks this week from Glasgow. Prices remain unchanged. We quote as follows: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—There has been no increase in the demand since last week, which still continues quiet. The new quotations of reduced prices still hold. We quote as follows: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3, one inch, \$2.95.

METALS.

At no time during the year has the metal market assumed a brighter or better tone than that which prevails at

present. In nearly all lines there is an upward tendency and no concessions are obtainable on any of the prices quoted. Canada plates, black sheets and tin plates, are stronger and in good demand. There is a local overstock of tin plates that will probably keep the price from advancing. An advance of one-quarter cent is noted on ingot copper, and an advance of 5c on pig lead. No other changes are noted.

Pig Iron—The improved condition continues and while the pig iron market is not brisk, it is somewhat steadier.

"Disc," No. 1.....	\$17.50 delivered Montreal
"Dom.," No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 " "
Glengarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.00 delivered Montreal
" (special).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.90 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "
No. 1 Cleveland.....	17.00 " "

Bar Iron—The demand is very brisk and the rolling mills continue to be unusually busy. We quote: Merchants' bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

Tool Steel—Little business reported this week. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jesop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c; Conqueror High Speed steel, 60c.

Merchant Steel—The market is quieter and merchant steel in somewhat less demand. We quote as follows: Sleighshoe, \$1.77 1-2; tire, \$1.87 1-2; Spring, \$2.75; toe calk, \$2.37 1-2; machinery (iron finish), \$1.97 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.77 1-2; rivet, \$1.82 1-2.

Canada Plates—There is a strong upward tendency with a good demand. We quote as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—In common with Canada plates there is a firmer market. No shading of prices is reported this week and those quoted are the minimum. Our quotations are as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge,

\$2.05; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—The market continues firmer and a very large demand is reported. There is no change whatever in price. We quote: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95. In less than case lots, 25c extra.

Sheet Zinc—The advance in sheet zinc, noted a week ago, still holds with no further change. The market is active. We quote, case lots, \$6.35 to \$6.60, and small quantities \$6.60 to \$6.85.

Tin Plates—While the market is firmer and evidence of an increase there is a local overstock that will counterbalance this, so that prices will probably remain the same. We quote: Cokes, \$3.75; charcoal, \$4.

Ingot Tin—No further advance is noted this week, but the market continues strong and prices quoted are the minimum. Quotations are, 31 to 31 1-2c.

Ingot Copper—An advance in ingot copper has taken place within the week, with a further expectation in that direction. We quote: 14c to 14 1-2c, the former price being for quantities only.

Ingot Zinc—Very little stock is moving at present and no change whatever in prices. We quote: 5 3-4 to 6c.

Pig Lead—There has been an upward tendency in pig lead for some time past, and the advance announced this week was expected. We quote: \$3.30 to \$3.40.

Scrap Metal and Old Material—Any business in metals is in what is being exported to Great Britain. The strong feeling in this market still prevails, and the advance prices quoted last week still hold. Our quotations are as follows: Heavy copper and wire, 11 1-2 to 12c; light copper, 10 1-2 to 11c; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 1-2 to 8 1-2c; light brass 5 to 5 1-2c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$11; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs; old rubbers, 5 1-2c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,

10 Front street east.

Toronto, Oct. 14, 1904.

Hardware.

BUSINESS continues in a volume which is satisfactory in every way.

While for some time the aggregate amount of business done has been rather under the totals for last year the quantity of goods now moving compares favorably with October last year. Jobbers who have an extensive connection with manufacturers express confidence as to the future. While values are lower than they have been they are at a fair, normal basis and if an increasing business can be done at present quotations there would be general reason for satisfaction. In such lines of heavy goods as iron, steel, pipe, etc., the tendency is upward and the disposition on the part of some buyers to anticipate an advance seems justified by the conditions. The opening up of new country and the activity in construction work resulting from the building of the Grand Trunk Pacific help to inspire confidence in the future prospects for the next few years.

At the moment there is no change in prices, unless mention be again made of the advance in window glass, which most jobbers are maintaining resolutely.

Lawn Mowers—Booking of orders for 1905 is reported by manufacturers as already showing increasing needs by the trade. Prices for 1905 are as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discount 50 per cent. with freight concessions in quantity shipments.

Guns and Ammunition—There is still a good movement in anticipation of the deer hunting season.

Washing Machines—Our quotations are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Ecilipse, \$48; Dowsnell, \$26; New Century, \$72; Capital, \$42; Magic, \$25; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Chain—We quote as follows; 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16

inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Barb Wire—The trade is beginning to manifest some interest in the line for next season. We quote as follows: \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—A fair inquiry is reported with prices unchanged as follows: No. 5, \$3.45; Nos. 6, 7, and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Inquiries continue regarding prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—An excellent business in this line is now reported. Nominally prices remain unchanged at \$2.45 per keg f.o.b. Toronto, with car loads at \$2.40.

Cut Nails—A better business doing with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are "C" brands, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—Business is improving at firm prices. We make the following quotations: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Prices have been confirmed. A good business is doing. We quote as follows: Iron rivets, 60 and 10 per cent. discount; iron burrs, 55 per

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Mallahs, Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required: Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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Drummond McCall & Co.

MONTREAL, QUE.

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Canada Iron Furnace Co.

MIDLAND, ONT

Limited

We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON, CANADA PLATES, TINPLATES, WIRE ROPE (W. B. BROWN & CO.), CEMENT, FIRE BRICKS, ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

cent.; copper rivets with usual proportion of burrs, 45 per cent.

Bolts and Nuts—Manufacturers are calling for an increased number of bolts and nuts. Prices show no change. We quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; nuts, hex., all sizes, 41-4c per lb.; square, 4c per lb.

Woodenware—We quote: Tubs, No. 0, \$11.25; No. 1, \$9; No. 2, \$8; No. 3, \$7; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c; Davis clothes line reels, 40 per cent. off list.

Cordage—A large amount of business has been done in rope for next season, but binder twine is not yet being booked in any quantity. Our quotations are as follows: Pure manila, 141-2c; British pure manila, 11c; sisal, 101-2c; double lahtyarn, 101-2c; single lathyarn, 10c; double shingleyarn, 101-2c; single shingleyarn, 10c; sasheord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 201-2c to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 161-2 to 17c; cotton waste, colored, 63-4c; white, 11 to 13c.

Building Paper—The demand on this market still continues to be the best, and this year is beyond doubt a record breaker in the building trade. Dealers claim this has been the most successful season in the business. The outlook is for a brisk demand till the end of the season. Quotations are as follows: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. N. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slater's felt, 60c per roll.

Cement—All the local manufacturers and dealers report a very rushing business, provincial as well as local. The outlook is for a good inquiry in this line up till setting in of Winter. Prices re-

Sheet Zinc Sheet Copper

and other Metals.

From Stock or for Import.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

COLD WEATHER IS COMING.

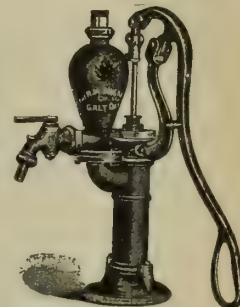
Have you got a line of good Pumps?
If not, you'd better write us about our

STANDARD ANTI-FREEZING PUMP

It's the best there is, and can't freeze if the valve is tripped by raising the handle. It's very simple, and the sale of one should bring you lots of other good business.

Catalog and prices for the asking.

The
R. McDougall Co.
Limited
Galt, Ont.



"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel
for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

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Agents for Ontario:

BAINES & PECKOVER, Toronto

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Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

main the same and will in all probability do so for some time. Prices quoted to the trade are as follows: Canadian Portland, \$1.70 to \$1.90; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex store; American Portland, \$1.70 to \$1.90 f.o.b. Toronto.

Firebrick—During the week under review the demand has continued to keep good. As this line is staple there is no expectation of an advance in prices. We quote the following prices to the trade: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

METALS.

A stronger tone is manifest on the metal market. The only advance is in ingot copper, which is 1-4c higher. In other lines, however, there is an upward tendency. The general impression is that there will be a general extension of business this Fall. Buying has not been as large from the first of the year up to this date as was the case a year ago, but it is believed that from now onward this condition will be reversed and a steadily increasing business will be done.

Pig Iron—Canadian pig iron producers are probably in a stronger position to-day than has been the case for some time. The demand from foundries continues large and as general satisfaction is expressed with Canadian iron the domestic production is readily absorbed. Prices are steady as below:

Midland, f.o.b., Toronto	\$18 70
Hamilton, No. 1	\$17 00 to 18 00
" No. 2	17 00 to 17 20
" No. 1, Hamilton	16 25 to 18 55
Midland, No. 1	17 00 to 17 25
" No. 2	16 25 to 16 75
Radnor, f.o.b. furnaces	27 50
Londonderry, f.o.b. furnaces	16 50 to 17 00

Bar Iron—An upward movement seems to have set in and prices are now firm at present quotations, which are as below: \$1.80 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—A satisfactory volume of business continues at steady prices. We quote: "M" self-hardening, 50c; "Alpha" high speed, 65c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10 to 11c; "Silver," 13c; "Special," 17c; "Rex" high

WALTER GROSE, 30 St. Dizier St., Montreal.

Sole Selling Agent for the

Nicholson File Co., Providence, U.S.A.

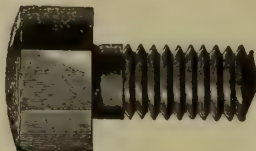
G. & H. Barnett Co., Philadelphia.

Nicholson File Co., Port Hope, Canada.

Ontario Lantern and Lamp Co., Limited, Hamilton.

Plume & Atwood Mfg. Co., Waterbury, Conn.

ORDERS SOLICITED FROM THE WHOLESALE TRADE.

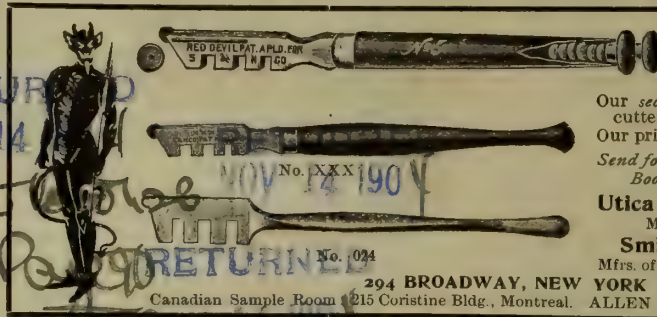


THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs, Etc. Cold Punched Nuts of every variety of finish.

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Red Devil Glass Cutters

Damascus Coal Carbon Disk Wheel.

Our secret of making a good glass cutter is unknown by others. Our prices are in your reach.

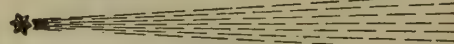
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Utica Drop Forge & Tool Co. Mfrs. of Nippers and Pliers.

Smith & Hemenway Co. Mfrs. of Cutlery and Hardware Specialties.

YORK CITY. ALLEN C. JENKING, Canadian Manager.

GILBERTSON'S



COMET

Agent: ALEXANDER GIBB,

Brand Galvanized Sheets

are NOT a cheap grade, although the price is low. Every sheet guaranteed.

Makers: W. GILBERTSON & CO., Limited Pontardawe, South Wales.

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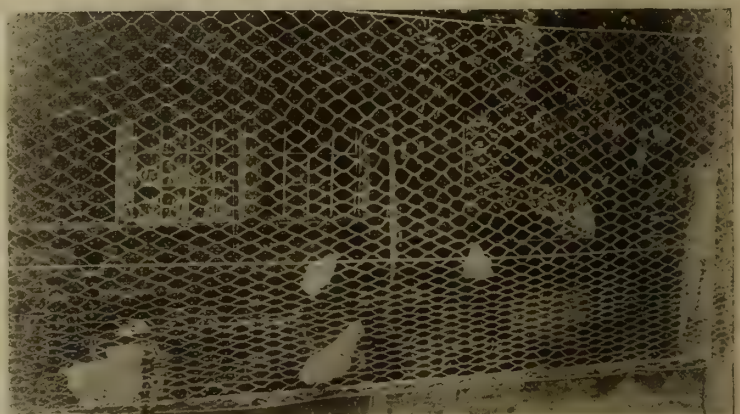
Page "Acme" Poultry Netting

This is the only netting that can be erected without puckers, bags or wrinkles in it. The selvedge wires being of straight smooth wire, the web can be adjusted smoothly and evenly along the edge and centre wires.

Notice that this netting has a large wire running through the centre (except in the 24-inch) which adds much strength to the web and enables it to hold its shape.

With Acme netting no boards at the top are necessary, and posts can be placed long distances apart.

The netting is very close at the bottom, the meshes being only 1 1/2 inch; at the top they are 3 inch. This makes it as effective as netting of 1 1/2-inch mesh throughout, and the cost is much less.



THE PAGE WIRE FENCE CO., Limited

WALKERVILLE

MONTREAL

ST. JOHN

WRITE FOR PRICES AND DETAILS

Merrick, Anderson & Co.

NORTHWEST DISTRIBUTORS

WINNIPEG.

"Hot Blast" Line for Coal.

For Soft, Hard or Lignite Coal, Coke, Etc.

Made by the D. Moore Company,
of Hamilton.

Heavy
draw
centre
shaking
grate and
lining.
Heavy or-
namental
legs and
base.

For
Soft Coal
Hard Coal
Lignite
Slack, etc.

STRATHCONA HOT BLAST

KNOWN EVERYWHERE

MANITOBA DEPOT

Merrick, Anderson & Co.

117 Bannatyne St. East, - Winnipeg.



STRATHCONA DOUBLE HEATER

No.	Diameter of Body.	Approximate Shipping Weight.
1115	15 inches.	134 pounds.
1118	18 "	174 "

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL.

Room 515 McIntyre Block,

Winnipeg, Oct. 10, 1904.

BUSINESS continues very bright with all markets holding a general firmness with the exception of the glass, which is now quoted in advance of last week's price list.

A crop of from 55 to 60 million bushels of wheat now seems to be assured for Manitoba and the Northwest. Hon. Clifford Sifton, Minister of the Interior, has cabled Lord Strathcona, High Commissioner for Canada in Great Britain, as follows: "I am now able to state definitely under the conditions of unusual difficulty in the Northwest a fair average crop of wheat of good quality has been reaped and is now secure from substantial damage. The report of injury by frost and rust has been greatly exaggerated. The wheat of Manitoba and the Northwest Territories will aggregate from 55 to 60 million bushels. Quality is good and the price is ranging around one dollar a bushel."

Probably the largest tubular boilers in Canada west of Toronto were delivered last week to the Winnipeg General Hospital by the Stuart Machinery Co. There are two of them, each 6 ft. in diameter and 14 ft. long, and weighing 25,000 lbs. These boilers are built in the very best way known to the trade and are capable of carrying a steam pressure at 140 lbs. per square inch.

The destruction by fire of the retail store of the J. H. Ashdown Co., Winnipeg, means the loss of one of the most modern and probably the largest retail hardware stores in Canada. The story of the retail business of the Ashdown Co. is contemporaneous with the development of Winnipeg, and the store has been a manifest evidence of the enterprise and progress of Winnipeg. It is needless to say that with such a vigorous proprietor as J. H. Ashdown, and energetic manager as James Lindsay, another retail store will replace the burned one as soon as the work can be accomplished.

Barbed wire, 100 lb.	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91

Annealed wires (uncoiled) 10c. less.

Horseshoes, iron, No. 0 to No. 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 20
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Horsenails, No. 4-1 1/2 in., list price.....	0 48
" 5-2 " " ".....	0 32
" 6-2 1/2 " " ".....	0 28
" 7-2 1/2 " " ".....	0 24
" 8-2 3/8 " " ".....	0 22
" 9-2 1/2 " " ".....	0 20
" 10-2 1/2 " " ".....	0 20
" 11-2 1/2 " " ".....	0 20
" 12-2 1/2 " " ".....	0 20
" 14-3 1/2 " " ".....	0 20

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

Cut Nails—

2d 1 in.....	\$4 10
3d Fin. 1 1/4 in.....	4 10
3d 1 1/2 in.....	3 75
4d 1 1/2 in.....	3 50
5d 1 1/2 in.....	3 50
6d 2 in.....	3 40
8d 2 1/2 in.....	3 25
10d 3 in.....	3 20
20d 4 in.....	3 15
30d 4 1/2 in.....	3 10
40d 5 in.....	3 10
50d 5 1/2 in.....	3 10
60d 6 in.....	3 10

Wire Nails—

1 in.....	4 15
1 1/4 in.....	4 10
1 1/2 ".....	3 70
1 3/4 ".....	3 50
1 1/2 ".....	3 50
2 ".....	3 40
2 1/2 ".....	3 25
3 ".....	3 20
3 1/2 ".....	3 15
4 ".....	3 10
4 1/2 ".....	3 10
5 ".....	3 10
5 1/2 ".....	3 10
6 ".....	3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10
Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American.....	4 25
28 gauge.....	4 50
30 gauge or 10 1/2 oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Extra sheets, 36 in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.....	11
Imitation ".....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05
Finplate, 1C charcoal, 20 x 28, box.....	9 50
" 1X.....	11 50
" 1XX.....	13 50

Ingot tin.....	25
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50
Pig lead, 100 lb.....	5 00

Black iron pipe, 1/2 inch.....	.....
" 3/4 ".....	.....
" 1 ".....	2 80
" 1 1/2 ".....	3 25

Black iron pipe, 1/2 inch.....	4 25
" 1 ".....	5 80
" 1 1/2 ".....	8 20
" 2 ".....	10 00
".....	14 00

Rope, sisal, 7-16 and larger, basis.....	10 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrum.....	11 25
Solder.....	20

Axes, chopping.....	\$ 6 75 to 12 00
" double bits.....	12 00 to 18 00
Bluestone.....	5 25

Screws, flat head, iron, bright.....	85 and 10 p.c.
Round ".....	80 p.c.
Flat " brass.....	75 and 10 p.c.
Round ".....	70 and 10 p.c.
Coach.....	70 p.c.

Bolts, carriage, $\frac{3}{4}$ or smaller.....	60 and 5 p.c.
" " 7-16 and up.....	55 p.c.
Bolts, machine, $\frac{3}{4}$ and under.....	55 and 5 p.c.
" " 7-16 and over.....	55 p.c.
Bolts, tire.....	60 and 5 p.c.
Bolt ends.....	55 and 5 p.c.
Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	55 and 5 p.c.
Square nuts, case lots.....	3c. discount.
" " small lots.....	2 $\frac{1}{2}$ c.
Hex " case lots.....	3c.
" " smaller lots.....	2 $\frac{1}{2}$ c.
Rivets, iron.....	50 and 10 p.c.
Copper, No. 8.....	32
" No. 12.....	36
Coil chain, 3-16 inch.....	9 $\frac{1}{2}$
" " $\frac{1}{4}$ inch.....	7 $\frac{1}{2}$
" " 5-16 inch.....	5 $\frac{1}{2}$
" " $\frac{3}{4}$ inch.....	5 $\frac{1}{2}$
" " 7-16 inch.....	4 $\frac{1}{2}$
" " $\frac{1}{2}$ inch.....	4 $\frac{1}{2}$
" " $\frac{1}{4}$ and $\frac{1}{2}$ inch.....	4
Spades and shovels.....	40 and 5 p.c.
Harvest tools.....	60 p.c.
Axe handles, turned, s. g. hickory, doz..	\$3 15
" No. 1.....	1 90
" No. 2.....	1 60
" Octagon extra.....	2 30
" No. 1.....	1 60
Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.
Building paper:	
Anchor, plain.....	65c.
" " tarred.....	70c.
Pure fibre, plain.....	67 $\frac{1}{2}$ c.
" " tarred.....	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
" Dominion, C.F., pistol.....	30 p.c.
" " military.....	15 p.c.
" American R.F.....	30 p.c.
" C.F. pistol.....	5 p.c.
" C.F. military.....	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
" chilled, 12 gauge.....	16 00
" soft, 10 gauge.....	18 00
" chilled, 10 gauge.....	19 00
Shot, Ordinary, per 100 lb.....	6 00
" Chilled.....	6 55
Powder, F.F., keg.....	4 70
" F.F.G.....	5 00
Tinware, pressed, retinned.....	70 and 10 p.c.
" plain.....	75 and 2 $\frac{1}{2}$ p.c.
" pieced.....	
Japanned ware.....	37 $\frac{1}{2}$ p.c.
Enamelled ware, white.....	45 p.c.
" " Famous.....	50 and 10 p.c.
" " Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American.....	27 $\frac{1}{2}$ c.
Prime white American.....	25 $\frac{1}{2}$ c.
Water white Canadian.....	25 $\frac{1}{2}$ c.
Prime white Canadian.....	24 $\frac{1}{2}$ c.

SCRAP.

No. 1 cast iron.....	\$14 to 15
No. 2.....	7
Wrought iron scrap.....	5
Copper (heavy).....	8 $\frac{1}{2}$ c. per lb.
Yellow brass (heavy).....	7 $\frac{1}{2}$ c.
Light brass.....	5c. to 6c.
Lead pipe, or tea lead.....	2c. to 2 $\frac{1}{2}$ c.
Zinc scrap.....	1c.

PAINTS, OILS AND GLASS.

White lead.....	\$5 00 to \$5 50
Putty in bladder, 2 $\frac{1}{2}$ lb., in keg of 100 lbs.	0 02 $\frac{1}{2}$
Turpentine, pure in barrels.....	\$ 0 87
" Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
" Boiled.....	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.75; 26 to 40, \$4.00; 41 to 50, \$4.50; 51 to 60, \$5 00; 61 to 70, \$5.00, in 100-ft. boxes.	
Lubricating oils, heavy castor machine.....	0 29
" " extra engine.....	0 27
" " dynamo.....	0 35
" " black.....	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	
Harness oil.....	0 50 to 0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00 $\frac{1}{2}$
" " and pressure.....	1 09 $\frac{1}{2}$

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B.C., Oct. 7, 1904.

THERE have been two discoveries of fire clay in British Columbia, and it may be that a manufactory will be established to utilize the product. One was made very close to Vancouver, on the farm of Mr. John Macclure, at Matsqui, in the Fraser River Valley. An excavation was being made for a root house when the discovery of a very fine deposit was made. The analysis was very satisfactory, and shows that the clay is suitable for all kinds of pottery, sewer pipe, bricks, and other similar articles. The only drawback is the fact that it carries a rather high percentage of iron oxide which will prevent its use for the lining of blast furnaces. The intention is to organize a company to manufacture the clay. The proximity of the find to Vancouver, about 30 miles, with water carriage, will enable manufactured articles being shipped at a low cost for transportation charges.

The other discovery was made in the Crow's Nest country on the west side of the Elk River, a mile or two below Fernie. It was while construction work was proceeding on the Crow's Nest Southern that the deposit was encountered, and it has turned out to be between a pottery clay and silica clay. With ingredients it may be excellent for pottery and fire bricks. Several claims have been staked.

Machinery men in Vancouver are much interested in the invention of Mr. John Kincaid, who has perfected a roller bearing which, it is claimed, will revolutionize mechanics. He has been at work on it for over two years, and now the International Roller Bearing Co., a close concern, has been incorporated to test the appliance. The whole feature of this invention is a double cone, which is so arranged that any weight can be borne, and which will be the nearest approach yet to the absolutely frictionless bearing. It is contended that the Kincaid roller bearing is as much beyond ball bearings as the latter is beyond the original method. The great trouble with the ball bearing was for the grit to work in and break the balls, causing a jam, so that it never came into use for heavy machinery. In the instance of the roller bearing, the heavier the machinery the greater the satisfaction, and in mills, steamers, and such like it will be a great advantage, as besides its special advantages at least 40 per cent. of power can be saved.

Negotiations are proceeding with eastern people to take over the rights. There are a number of applications, and it is possible the company may accept

one of them. Two street railway companies in Canada are also testing the appliance, and if it is as satisfactory in practical application as it has been in preliminary experiments they will adopt it.

* * *

Mr. H. C. Hammond, of the firm of Osler & Hammond, Toronto, was in Vancouver this week, having just returned from Bullion, Cariboo, where he was present at the final clean-up of the Consolidated Cariboo Hydraulic Co. This year the company had 82 days on which water was available, and cleaned up \$86,000, an average of over \$1,000 per day. This amount, however, was not sufficient for expenses. The great trouble has been lack of water, and Mr. Hammond states the only thing the company can do is to expend another quarter of a million dollars in bringing more water to the reservoirs. When the company began operations in 1892 and 1893, those years were very wet, and rivers across which horses could hardly swim can be crossed now on stepping stones. With plenty of water, it is not difficult to calculate what the output of the property would be.

* * *

The Vancouver Gas Co., which is now controlled by the B. C. Electric Railway Co., purposes expending \$250,000 in extending the gas mains throughout the city. In this climate, which is not very cold, gas is a fine cooking material and is especially adapted for heating offices in the Winter, and for houses in the Fall and Spring.

The Canadian Pacific Railway is considering a proposition of the B. C. Electric Railway Co. for the purchase of the Lulu Island branch, running from Vancouver to Steveston.

The Victoria Power Co., a subsidiary company to the B. C. Electric Railway Co., has been incorporated for the purpose of supplying increased power, and three quarters of a million dollars will be expended in the development of the power in the Koksilah River, back of Victoria. It has been stated that the Victoria and Sidney branch of the Great Northern Railway is to be electrified, and that when the power is ready it will be applied to this purpose.

Next year the steamers on the Yukon River will use coal instead of wood. Coal is found at Five Fingers, on the Yukon River.

One of the features of the New Westminster Exhibition was the "knock-down" houses, the exhibit of the B. C. Mills Timber & Trading Co., of Vancouver. They are the patent of Mr. E. C. Mahony, manager of the Royal City Mills branch, of this city. These houses were displayed at Winnipeg and attracted considerable attention as they are especially adapted for the Territories, and dwellings similar in design were put

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion.	1 year.....	\$30 00
" " "	6 months.....	17 00
" " "	3 months.....	10 00
50 " " "	1 year.....	17 00
" " "	6 months.....	10 00
25 " " "	1 year.....	10 00

SITUATIONS VACANT.

WANTED—Man well posted on paints, brushes and ammunition for Western Canada, to take charge of these lines for jobbing firm. Good opening for a hustler. Apply Box 174, HARDWARE AND METAL, Toronto. (42)

WANTED—Position in good retail hardware, by young man with two years experience in wholesale. Best references. Box 177, HARDWARE AND METAL, Toronto. (42)

BUSINESS CHANCES.

BLACKSMITH STAND FOR SALE—On Yonge street; doing a first-class trade. For particulars, apply to James Childs, Eglinton. f

HARDWARE STOCK—\$1,260.00—At 68c. on the dollar. Box 448, Newmarket. f

MECHANICS WANTED.

BLACKSMITH WANTED—Good general and shoeing; state wages and experience. E. F. Benson, Milton, Ont. f

SITUATION WANTED.

HARDWARE SALESMAN—Twenty years' experience in England in all branches; wants position at once, with a view to picking up Canadian methods. Would not object to travel. Ralph Vincent, Tesserton, Ont. (42)

WANTED.

WANTED—Customers wanted by J. Albert Schmidt, Solingen, Germany, for his knives, and scissors, also for household specialties which also sell to hotels, restaurants, hospitals, etc. Self acting cooks, potato-peeling and washing machines, clothes wringers, folding ladders, cask stands, dish-cleaning machines, etc. (44)

FOR SALE.

FOR SALE—Good paying tinshop; good dairy trade; large eavetrough business; everything complete for the work; stock, tools, horse, rigs, cheap. R. B. Scriven, Otterville, Ont. (48)

PRIEST'S CLIPPERS

Ball Bearings

Largest Variety,
Toilet, Hand, Electric Power

ARE THE BEST.

Highest Quality Grooming and
Sheep-Shearing Machines.

WE MAKE THEM.

SEND FOR CATALOGUE TO
American Shearer Mfg. Co., Nashua, N.H., USA

Wiebusch & Hilger, Limited, special New York
representatives, 9-15 Murray Street.

up at New Westminster. Only an expert in construction could discern the difference between them and the ordinarily made house. One with six rooms and a hall is delivered at the mill for \$500, while there are all designs and all prices, from \$150 up. A comprehensive and interesting catalogue is now being prepared for the press.

H. J. Gilbert, president of the Saginaw Mfg. Co., of Saginaw, Mich., is here this week. He is after spruce ends which are usually burned by the mills, but which he says he can use in the manufacture of woodenware, such as washboards, etc., even paying the duty. He states he has contracts to supply some of these articles with western merchants.

PRACTICAL HINTS ON ADVERTISING.

Better be on the safe side and make the ad too plain rather than leave any doubt in a single reader's mind as to what you are driving at.

If you have a trade-mark and it is any good at all, you ought to use it in all your advertising matter. If you haven't any or your present one is hardly creditable, by all means get a new one and use it for all it is worth.

People will instantly recognize it and will associate it with your ads and your goods. Pretty soon your trade-mark will have a reputation and people will be satisfied with no other kind of goods.

If you have a good thing you can't push it too strongly, and a good trade-mark will be a powerful help.

* * *

Very often it is a great deal harder not to say a thing than to say it.

Some advertisers have pet ideas which they feel they simply must put into their ads. These ideas may consist of supposedly smart sayings—generally a play on words or a bad pun. All puns are bad anyway, so the "bad" is really superfluous.

If they saw these ideas in other people's ads, they would think them pretty sad, but as long as they are their own ideas life will lose its sweetness until these ideas appear in print.

When you come across an idea you think particularly cute or smart, show it to a dozen of your friends, and ask their frank opinion. Unless the verdict is unanimously favorable, reject it. Even if they all think it good, let it lie around a few days and cool off. Then if you can look it in the face and still be proud of it, you might try your luck.

—Charles Austin Bates.

COLONIAL BANANA LIQUID.

The Colonial Drug and Chemical Co., Toronto, are manufacturing a banana liquid which should find a place in every hardware store. Formerly this liquid was all manufactured in the United States. A few months ago the Dominion Government passed a law allowing banana liquid to be manufactured from fusel oil in Canada by paying the Government treasury 50c per gallon on the fusel oil used. The liquid must be manufactured under Government supervision. This requires the Colonial Drug and Chemical Co. to have a Government official present while liquid is being made. The salary of this official must be paid by the company. In addition to this the firm is bonded for \$20,000.

A NEW RAZOR.

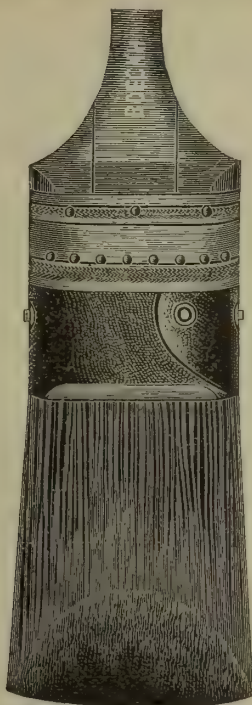
The Queen City Cutlery Co., Toronto, are putting on the market a new razor, "The Hummer." This razor is manufactured of Sheffield steel, has full concave blade, black rubber handle and 5-8 blade. It is fully guaranteed and will be sold to the trade at such a price that they can retail it at \$1.50 and make a good profit on it. The razor has been on the market six weeks and Mr. I. A. Tobias, the manager, reports that it has already met with favor among a number of dealers. The trade will do well to write the Queen City Cutlery Co., of Toronto, for full information regarding this razor.

TIMID HARDWARE MEN.

Too many hardware men are afraid they will get outside of their line, says Trade, if they take on anything that is not strictly hardware. Usually some good chances to make money will be overlooked by this idea. Take clocks, for instance. Many are afraid to handle them, yet the hardware jobbers all carry clocks. Then there are many and many other articles and lines that the hardware man might just as well handle. There are sewing machines, typewriters, cream separators, gasoline engines, washing machines and a hundred others that do not come to mind just now. Do not be afraid to branch out.

AN ATTRACTIVE STORE.

One of the most attractive hardware stores in Western Ontario has been opened in Tillsonburg by C. W. Conn, whose premises were destroyed by fire some months ago. In addition to the tinware stock formerly carried Mr. Conn has installed a stock of hardware, purchased from the Kennedy Hardware Co., Toronto.



THE STANDARD GOODS
OF CANADA

Points of Superiority to be Found in
BOECKH'S
 AND
BRYAN'S
Painters' Brushes

- 1—The method of removing all loose hairs.
- 2—The high grade of materials used in their manufacture.
- 3—The excellent workmanship, finish and up-to-date designs.
- 4—The guarantee, which ensures entire satisfaction.

Investigate the merits of these standard goods. One trial will convince you of their superiority over all other makes.

Manufactured by

United Factories, Limited
Head Office, TORONTO, ONT.

HIGH WORK

For painting or tinning **Steeple**s, or other very high work, we furnish ladders to order on short notice. We have made them as long as 92 feet, thoroughly strong and reliable, and can make them longer if desired. A ladder like this is **cheaper than a scaffold and safer**. Do not think it too much to buy one for one job: if it be known that you are equipped for high work you will get any jobs of that kind in your neighborhood and at **your own price**. We have just supplied a 64-ft. W. E. Ladder in two sections to a firm of painters in this city, and they are highly pleased with it. We shall probably put a detachable third section 20 feet long to it, and perhaps a shorter one to that. The joints will be all steel clad and the sides steel wired, and the whole will still be absolutely strong and safe.

We make **Extension Ladders in all lengths**, from 20, 24, 28, 32, 36 ft., and so on as high as you like. Write us for quotations.

The Waggoner Ladder Company, Limited, London, Ont.

Western dealers please write E. H. Briggs & Co., Winnipeg, our western agents.

PAINT, OIL AND BRUSH TRADES

The Fall Paint Trade.

DO not lose part of it because you neglected it. There should be a great deal of painting done in your neighborhood this year. If you encourage it by every kind of suggestion and influence it is bound to be of satisfactory volume—at least in the towns and villages.

Talk the use of paints, advertise your paints and the advantage of painting, set a good example at your own store, home, and other buildings.

There should be activity in prepared house paints, in floor finishes, in varnishes. Many of your customers have not been educated to the fact that painting instead of being an expensive luxury is really a practical economy.

It is not too late to boom up this business. Ask the most likely customers who come into your store during the next few weeks; write a short letter to those who do not come in; advertise paints for a week or two; in short, start a Fall paint trade campaign, using every reasonable method likely to increase business.

The 1904 Flaxseed Crop.

ACCORDING to the Government crop report of October 10, the average condition of flax on October 1 was 87.0, as compared with 85.8 one month ago and 74.0 October 1, 1903. This confirms previous reports of the fine quality of the 1904 flaxseed. The season is now so far advanced that near the entire crop is out of danger of frosts or dampness, and it is safe to predict that the crop will not only be of high quality but of large quantity as well, as the two always go hand in hand. The crop is a disappointment to the bulls. It is too large to carry over into next year without a big expenditure of money, and with doubtful profit to the holders, as next year's crop may be larger. The early estimates of crop damage, small acreage, etc., were evidently somewhat awry.

Estimates of the probable size of the crop continue to grow as the reports of threshing returns come in. Actual threshing reports average 14 bushels per acre. These reports come from upwards of 100 localities in North Dakota, and in case they hold out the yield may easily be nearer 25,000,000 bushels than 20,000,000. What this means to the seed and oil trade may be seen from a comparison with the early estimates of the seed crop, which were "conserva-

tively" placed at about 16,000,000 bushels from the entire flax-raising territory. It would be a shock indeed if, with the big yields of high-grade seed that are now reported, the entire crop should be double that early estimate.

Paints for Outside of Dwelling Houses.

A WRITER in one of our exchanges, discussing the best paint for the exterior of dwelling houses, suggests that if the house has not been painted before a first coat or priming of pure white lead be used, either plain or tinted, to suit the taste, and with pure raw linseed oil for a thinner, and not over 5 per cent. turpentine dryer added. This is to be rubbed well into the wood and allowed to stand at least three days before the second coat is applied. For new work it is best to have three coats, and for the third and last coat a mixture of four parts white lead, by weight, to one part of zinc white, colored to suit the fancy, and thinned again with

pure raw linseed oil and not over 5 per cent. Japan dryer. Should it be decided to use prepared paint let the first or priming paint be pure lead and have the prepared paint used as second and third coats, following directions on label.

If the house has been painted before, see that the surface is thoroughly dusted and every loose particle of old paint removed; touch up where needed and have the surface repainted with either two coats of pure lead tinted with color or have two coats of prepared paint applied.

Glass Business.

Stiffen up your glass prices. There is a scarcity and even if you have a surplus it would be better to sell a small part of your stock to another retailer at gross cost and get some profit out of the rest than to cut prices to rush out the goods. There is neither necessity nor wisdom in making any concessions on window glass business this season.

The Paint of Quality



The first and most important object in making Hollywood paint is to get the Quality right, then regulate the price accordingly.

This is why Hollywood costs a little more than some others; but it is cheap paint because of its Quality.

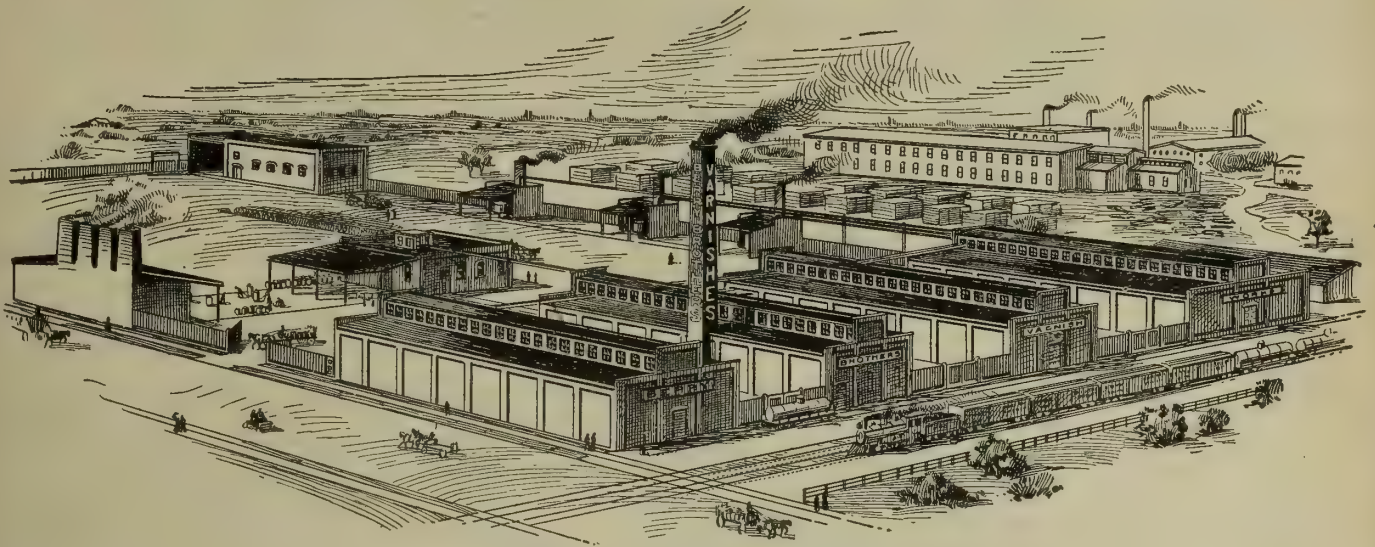
In Paste, Ready-Mixed and Floor.

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The Imperial Varnish & Color Co.

TORONTO, CANADA.

LIMITED.



IT IS NEARLY
HALF A CENTURY

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

Berry Brothers
LIMITED

WALKERVILLE, ONT.



Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Oct. 14, 1904.

MANUFACTURERS are pleased with the volume of business that is being done at present, being somewhat brighter than usual. Dealers throughout the country are anxious to replenish and renew their stock before the advance in freight rates so that large and numerous orders are coming in. There is no change whatever in the price of staples. Paint oil shipments are coming in freely and consignments are going out equally well. Turpentine continues steady and other lines remain unchanged.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1, 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Turpentine—Single barrels, 81 1-2c per gallon; two to four barrels, 80 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs. The above prices are net 30 days; for longer terms prices are higher. The market is firm.

Linseed Oil—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure White, \$2.80

to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street E.
Toronto, Oct. 14, 1904.

WHILE there is an excellent sorting trade in oils, varnishes, dry colors, etc., throughout the province business in Toronto is much curtailed as a result of the strike of the builders' laborers during the Summer and the consequent limitation of building operations. Prices are unchanged throughout.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 to \$2.62 1-2 per gallon, No. 1 \$2.50, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels,

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GILLETT'S LYE

They are named on the wrapper.

You will then be able to suggest its use at every turn—and multiply your profits.

E. W. GILLETT COMPANY LIMITED

TORONTO

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W. W. AMERICAN OIL has no equal.

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T. H. HAMILTON, General Manager

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"SUSAN JANE'S TOP NOTE."

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Telegrams receive particular care—

Letter orders are welcome always—

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\$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2c per lb and 8 1-2c for single tins.

Window Glass.

MONTREAL.

The expected result of the scarcity of glass in the primary markets, was experienced this week, when an advance in all sizes was announced. The basis of \$3 per hundred feet, first break, has been advanced to \$3.25. The discount for diamond glass, which was formerly 25 per cent. is now only 15 per cent., and on double thick is 33 1-3 per cent. instead of 40 per cent. The usual terms of four months, or 3 per cent. discount thirty days are given. Our quotations are as follows: First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent discount thirty days.

TORONTO.

The strike and lockout in Belgium, the curtailment of production and the consequent advance in prices continue the features of the situation. Dealers maintain almost unanimously the decision to quote net present lists. We quote: Star first break, \$3.80 per 100 feet; double diamond, first break, \$5.06 per 100 feet, net f.o.b. Toronto.

Tariff Influence on English Varnish Sales.

IN an interview with Mr. Thomas Reade, of Wolverhampton, Eng., in the Oil and Colourman's Journal, London, the following passage appears: "We all recognize that the tariffs work against us in a trade like the varnish trade. We have to encounter heavy duties on most of our exports," was the reply.

"Is that the direction, through varnishes, in which you are most interested as regards your own manufactures?" was asked.

"Yes. Varnishes are the one item it affects us in."

"To what extent have foreign makers got their varnishes into this country of late years?"

"They have been sent in from America; chiefly varnishes used by some of the metal trades. I don't think they have made much headway in coach-builders' or decorators' varnishes."

"Has there been any considerable importation from the Continent?"

"I don't think so—practically none," was the guarded reply.

"Your interest in the matter then is, naturally, as regards duties on English-made goods in other countries?"

"Yes; and I may say that while the duties are unfavorable—almost prohibitive as regards the United States—in other places they are not so adverse as might seem, because the countries cannot themselves produce anything as good as the British article."

"That is gratifying, Mr. Reade. Is the superiority of English varnishes maintained in the face of the chemical developments in Germany?"

"Oh, yes. They cannot be beaten at all. The Germans may get some trade in their own country by means of low prices. We don't fear, personally, that they will compete with us in places like Australia, or Brazil, or Canada."

"You name two of our own dependencies. How do you regard the treatment of the home manufacturers by the dependencies generally?"

"I don't think we have much to complain of as regards Australia, Canada, New Zealand, or India. Of course, if Canada were to become a varnish-making centre of importance, then the duty might tell; but at present practically all the varnish that is used there comes from England."

"Have you any idea as to how the Colonies might be utilized more largely to the advantage of the home trade?"

"Of course, in so far as we can get a preference over other countries, that is all in our favor. They seem disposed to give us some preference, so long as they don't abate their duties; if they would extend that principle it would be in our favor."



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a good paint firm, we put ourselves in your way. Your search will be over. We are in business seriously to make good paints and kindred preparations. We solicit your business.

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UNEXCELLED
MEMORIAL WINDOWS:

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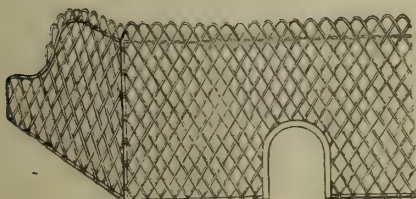
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Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

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HIGH-GRADE FURNITURE and HOUSE VARNISHES.

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GLUES are of such high class

and are so suitable for Export that we would like to quote you. Export trade in this line is growing rapidly, and we pack in casks or cases as preferred. Quality unrivalled.

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Manufacturers of

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Which can be obtained direct from the works
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Sell this paint for stove
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iron work subjected to
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**"Island City"
Brand.**

"Island City" Paints



make profits for the dealer.

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The "Island City"
brand will not discolor
or turn black. Now is
the time to push it for
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Women want it for
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frames.

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By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed.....\$4.00

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A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages.....25c.

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Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates.....\$1.50

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A book prepared for the Steam and Hot Water Heating Course at the New York Trade School, with supplementary chapters on house heating, specifications and surface estimating, by Thos. E. McNeill. 140 pages; 5 x 7 in.; numerous illustrations; cloth binding.....\$1.00

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Twelve short lessons on figuring from architects' or scale drawings the amount of material required to cover a given surface in flat, hipped or irregular shaped roofs, by W. Neubecker. 31 pages; 5½ x 8 in.; 12 illustrations; paper cover.....25c.

Enquiries for above books should be sent to

BOOK DEPARTMENT

HARDWARE AND METAL,
Toronto

TENDENCIES OF WALL PAPER DESIGN.

BEFORE attempting to outline the tendencies of wall paper design at the present time I should like to earnestly direct the attention of architects especially to a kindred subject, one at least inseparably connected with the decorator's work. I think I can say without exaggeration that decorators approach the work of covering the plaster walls of houses and other buildings erected of late years with trepidation amounting almost to terror as to the results. To see one's best laid plans and most cherished schemes completely frustrated by the treacherous under surface is more than disappointing. The "skin or putty coat" so much in use to impart that beautiful snowy smooth surface which so strongly appeals to some people has usually no actual adhesion to the coat beneath it and only waits the application of some material to sever its weak connection and destroy the decorator's work. The so-called sand finish of many plasterers is almost as great a delusion. On walls thus treated many patches will be found into which no sand and very little plaster of paris has entered—nothing but lime. Plasterers freely admit these imperfections and also that it is possible to get as good results as were obtained in houses a generation ago, but they claim that current prices do not admit of the use of sufficient plaster nor of sufficient time being given to the work. Surely it is a false economy to cheapen a material which is admittedly imperfect at best, which covers so much surface and which places a stamp of dilapidation on the house out of all proportion to its relative cost to the total cost of the building. I feel satisfied that this work does not receive the attention it deserves at the hands of the architect, and that not only would the problem of decoration be greatly simplified but that the life of the plastering would be materially lengthened if honest work were insisted upon.

Another feature in the preparatory work of ceilings and walls for decoration deserves more than passing notice. I refer to the obtaining of true perpendicular and horizontal lines in the angles of the room. It is no uncommon thing to see the ceiling run from one to one and one-half inches out of true in a wall of twelve or fifteen feet. The up-right angles of the room are frequently as much out and in many cases meander in and out of line as they climb to the ceiling. Many rooms are two or three inches wider at one end than at the other. It can be easily understood how difficult it becomes under these circumstances to apply pattern of any sort so that it shall not appear to be leaning one way or the other. These defects

are not by any means confined to cheap buildings but may be seen in some of our most pretentious structures.

And while I am on this portion of my subject I should like to point out what is always to the decorator at least the unexplainable practice of many architects, of carrying doors and windows in the room to two, three or more different heights. My own dining room has five such openings and every one is of a different height, varying from the others by several inches. There was no reason why the three doors at least should not have been of the same height.—W. H. Elliott, in Canadian Architect.

BUSINESS CHANGES.

ONTARIO.

THE plant, etc., of the Canadian Wringer & Specialty Co., Limited, Toronto, are advertised for sale.

Receiver is in charge of the business of the John Bowman Hardware & Coal Co., London.

Richard Simpson, blacksmith and carriage-maker, Lucan, Ont., is advertising business for sale.

QUEBEC.

Peter Lyall & Sons, contractors, Montreal, have dissolved.

F. E. Came, manufacturer railway specialties, Montreal, has assigned.

Marcelin Tremblay has registered as proprietor of the Dominion Electric Co., Montreal.

The Slade Electric Co., manufacturers electrical supplies, Quebec, have dissolved partnership.

P. I. Bazin and J. P. H. Bazin have registered proprietors of the Bazin Mfg. Co., nail manufacturers, Quebec.

Mary J. Hunter has registered proprietress of a hardware business in Quebec under the style of J. R. Kane.

Isaie Belaire and Mrs. Nazaire Bouvier have registered as manufacturers under the style of the Universal Fire Escape Co., Montreal.

MANITOBA AND N.W.T.

Merrill & Hingston, hardware dealers, Holland, have sold to David Speat.

Forbes & Craddock have succeeded Adam Forbes, hardware merchant, Rathwell.

The J. H. Ashdown Hardware Co., wholesale and retail hardware dealers, Winnipeg, have suffered loss by fire.

The assets of the estate of W. W. Carruthers, hides and wool dealers, Brandon, Man., are advertised for sale by tender.

BRITISH COLUMBIA.

The Sandon Hardware Co., Sandon, have dissolved partnership.

RETURN
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STOVE SENSE

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Empire Queen Range

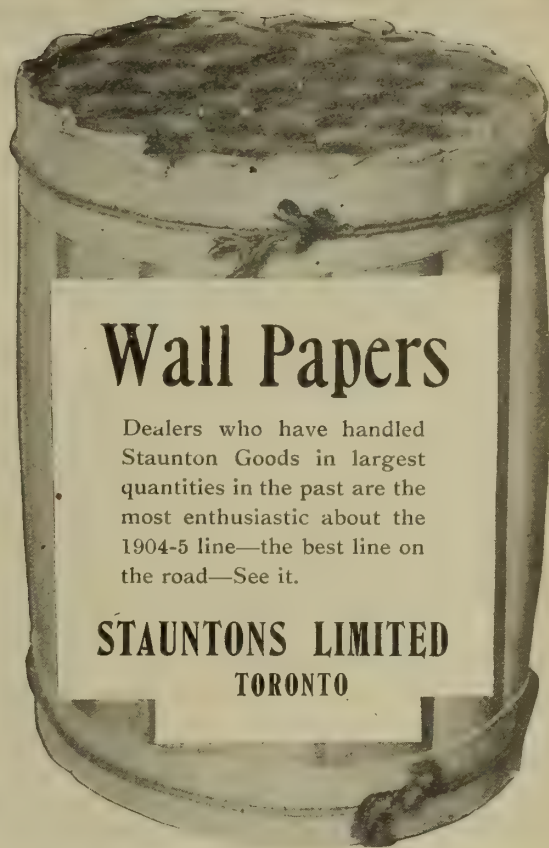
We solicit the investigation of our range by the most exacting stove critic. We have a range that will stand the severest tests, and one that the dealer can sell every time and give his customer the best service.

Its three features are

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**CUSTOMS BROKERS,
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Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Oct. 14, 1904.

it was impossible to get certain sizes and prices advanced considerably. Dealers should take advantage of the low prices prevailing at present to stock up, as they are not likely to be maintained. There has been no change in prices since last week.

Range Boilers—From all quarters large orders are being received for range boilers. Our quotations are: Iron clad, 30 gallon, \$6; and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—The lead market still continues firm, with an upward tendency, but so far the price of lead pipe has not advanced. The demand is very good. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—There is no new feature in soil pipe and fittings market. As before the demand is good and supplies well up to the mark. We quote: nominal prices. Discount on all sizes up to 6 inch 67 1-2 to 70 per cent.

Iron Pipe Fittings—As reported last week, there is considerably less cutting and a somewhat firmer market than has prevailed recently. There is a good trade doing. We quote: Nominal prices, discount on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—Conditions that obtained in the iron pipe market a year ago, are likely to re-occur. The price has been low for some time and considerable cutting has been going on. Now with a likelihood of a scarcity in different sizes, prices are assuming a firmer degree and there is every likelihood of an advance. Our quotations are as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1-1/4 in., \$7.35; 1-1/2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1-1/4 in., \$10.05; 1-1/2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and

on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1-1/4 in., \$10.55; 1-1/2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1-1/4 in., \$13.25; 1-1/2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—There is an upward tendency, but prices continue as before. The demand is good. We quote: Bar solder at 17 1/2c and wire at 18c.

Soldering Irons—The demand is fairly good. Prices are as follows: 1 to 1-1/2 lbs, 37c per lb; 2 lbs and over 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Oct. 14, 1904.

BUSINESS continues to expand in volume in every direction. In the city a large trade in all classes of goods is reported, while throughout the province the demand evidences a steady expansion in the use of plumbing goods of all kinds.

Prices throughout are unchanged but there is a movement towards higher prices on iron pipe, which is still selling at a ridiculously close margin.

Lead Pipe—A good trade continues at steady prices. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—An increase of 5 per cent. is noted in the discount on headers and nipples. Prices are steady. We quote nominally: Malleable fittings 20 per cent for American and 35 per cent. for Canadian; cast iron (standard), 65 per cent.; headers, 60 per cent.; flanged unions, 60 per cent.; malleable bushings, 57 1-2 per cent.; cast iron bushings, 70 per cent.; nipples

FURTHER cold weather for a few days has stimulated the heating and plumbing supplies market to a considerable degree. The demand for range boilers, furnaces, and all heating accessories is unusually brisk. There is every likelihood of a scarcity of iron pipe in the near future. A year ago



A profitable paint trade doesn't end with mixed paints but it often commences there. Paint trade expands easily. It leads out to Paint Brushes, Enamels, Gloss Paints, Stains, Varnishes, Glass and many other lines, all bringing in handsome profits. But the foundation must be right. A risk on this is a risky risk. What line have you got? Could it be better? Let us tell you about

RAMSAY'S PAINT

and what we can do for you; what the price is, and how it is advertised. It will assist you to a paint trade.

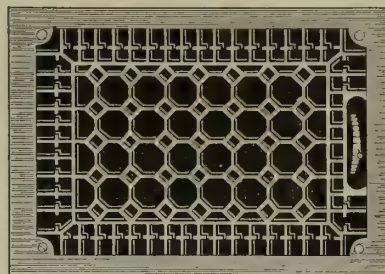
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Paint Makers.

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MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



The Standard Ideal Sanitary Co., Limited

MANUFACTURERS OF

Porcelain Enamel Bath Tubs, Lavatories, Sinks, Slop Hoppers

"MADE IN CANADA."

Porcelain Enamel Bath Tubs,

Porcelain Enamel Sinks,

Porcelain Enamel Lavatories,

Porcelain Enamel Lipped and Plain Urinals,

Porcelain Enamel Slop Hoppers,

Porcelain Enamel Factory Wash Sinks.

THE ONLY MANUFACTURERS OF PLUMBING GOODS IN CANADA

Head Office and Factory:

Port Hope, Ont.

Sales Office:

50 Colborne St., Toronto.

up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A steady demand continues with the discount unchanged at 15 per cent.

Iron Pipe—Competition is not so keen as has been the case for some time, but there is still some cutting. We quote: Black, 1-4 in., \$1.97; 3-8 in., \$2.15; 1-2

in., \$2.28; 3-4 in., \$2.86; 1 in., \$4.10; 1 1-4 in., \$5.62; 1 1-2 in., \$6.72; 2 in., \$8.98. Galvanized, 1-4 in., \$2.80; 3-8 in., \$2.86; 1-2 in., \$3.14; 3-4 in., \$4.01; 1 in., \$5.75; 1 1-4 in., \$7.85; 1 1-2 in., \$9.43; 2 in., \$12.57.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.

THAWING OUT PIPES BY ELECTRICITY.

WE have lately had so many inquiries about how frozen water pipes can be thawed out by electricity that we take pleasure in reprinting the following article by Edward A. Briton on this subject, which appeared in the monthly edition of this journal in June, 1899.

Noticing the interest being taken in the subject of the application of electricity to thawing frozen water pipes, I send the following information as showing what may be done in that line with simple apparatus:

The apparatus used by myself consisted of a 150-ampere fuse block, a 200-ampere ammeter and a water rheostat. The latter was made in the following manner: An ordinary barrel was about half filled with a solution of water and common salt, the salt being merely put in to increase the conductivity. Then a coil of bare copper wire was dropped into the barrel, forming one terminal of the rheostat. The other terminal was made by fastening a bundle of seven common arc carbons to the end of a piece of line wire. This could be held in the hand and raised or lowered in the solution, thus adjusting the resistance so as to give any desired current.

The current used was taken from a 100-kilowatt, 220-volt, direct-current generator, the connections being made in the following manner: A tap from one of the main line wires was run directly to a fire hydrant in front of a private dwelling, where the water connection was frozen. A tap from the main line wire was run directly to the copper terminal in the water rheostat. The carbon terminal was then connected to the ammeter, and the ammeter to the fuse block, and from the fuse block a wire was run to the sillcock on the house. The carbon terminal was then lowered into the solution until the ammeter showed a current of 150 amperes, and in about twenty minutes after the current

was turned on the water was flowing a full stream from the sillcock. The house connection was a 1-inch pipe about 10 feet in length, though how much of this was frozen we cannot tell.

We next thawed out a line of 80 feet of 1-inch pipe. In this case the fire hydrant, which was connected direct to the main line wire, was at a distance of 100 feet from where the 1-inch pipe tapped off the water main. We used a current of 180 amperes for just fourteen minutes, and the water came freely from the two faucets inside the building. This had been frozen for about two weeks, and the owner had spent about \$15 trying to get it thawed out.

We next thawed out two house connections at once, the houses being on opposite sides of the street, and connections made to the respective sillcocks of the two houses. With a current of 160 amperes the water came from the first in nine minutes and from the second in thirteen.

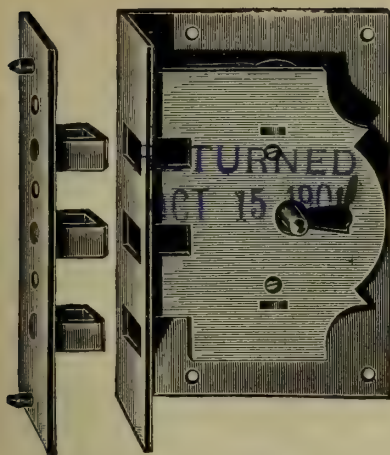
Our next attempt brought out a very striking instance of "drop in the zinc." The house where the connection was frozen was situated at the end of a pair of No. 6 line wires, 2,250 feet in length. In this case we were unable to get a current of more than 125 amperes, no matter how close we held the terminals to the rheostat. We ran the voltage at the generator up to 245 and short-circuited the rheostat, thus connecting one main line directly to the fire hydrant in front of the house and the other directly to the sillcock, and then got a current of 130 amperes. In this case, when we turned on the lamps in the house the filaments did not show even the faintest glow, thus indicating practically a dead short-circuit on the line. As the heat loss in the line must equal the energy put into it, or $I^2 R = EI$ and as the resistance of 4,500 feet of No. 6 wire is nearly 1.78 ohms, we have therefore $130^2 \times 1.78 = 245 \times 130$, or $300.82 = 318.5$,

a calculation which is about as close as one could expect after making allowance for hurried measurements, unreliable instruments, and loss in the pipe. — Domestic Engineering.

Church Heating and Ventilation.

THE ventilation of churches in which the worshippers are packed with a minimum of floor space, for which no excess of height can compensate, is notoriously defective, and, indeed, is worse in proportion to the thoroughness of the heating, since the higher the temperature within the building the more carefully are cold draughts excluded. One of the most interesting systems of combined church warming and ventilation was introduced by a German heating engineer, in a Berlin memorial church that in general plan resembles St. Paul's Cathedral in London, though of smaller dimensions, the height of the nave and transepts being 82 feet and of the dome 237 feet. The corresponding measurements in St. Paul's are 100 feet and 360 feet respectively. To the height of 80 feet from the floor the walls are traversed by hot air chambers, so that from the ground to the galleries, 22 feet above, there is no perceptible difference of temperature, the air being kept constantly at 60 degrees. The radiating surface is placed high up, in the neighborhood of cooling surfaces, maintaining a higher temperature in the upper portion of the building, and intercepting and reheating the cooled air in its descent toward the lower part occupied by the congregation. There are thus four strata of air of different temperatures. On the ground floor and in the galleries there are very few coils, but along the first entablature, at a height of 95 feet, the coils are sufficiently numerous to counteract the loss of heat through the walls, which there are no longer traversed by hot air channels, and to maintain from this level to that of the second entablature—at a height of 145 feet, or 50 feet above the first—a temperature a few degrees higher than that in the parts below. Other coils are fixed above the second entablature and in the lantern of the dome. To avoid the dangerously chilling draughts that would follow the opening of the doors in the intense cold of a Prussian Winter, the entrances are provided with double swing doors, and coils are placed in the intervening passage. The engineer maintains that the system of heating the upper more than the lower regions of the air is the only proper course in such lofty buildings as churches. — Plumbers' Review.

Isaac Goldberg has registered as proprietor of the Union Bed Spring Mfg. Co., Montreal.



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Plumbers Seek Taxation.

UNKNOWN to the city plumbers of Montreal the local branch of the Manufacturers' Association in a letter to the city council protested against an annual license of one dollar per man levied on the workingmen plumbers. The latter resented this as they had sought the taxation and addressed the following letter to the city council:

"The Manufacturers' Association of Montreal thought proper to protest by a letter addressed to your council against the fact that an annual license of one dollar was imposed on the workingmen plumbers of this city;

"That this protest was made without the least authorization on the part of the workingmen plumbers;

"That, on the contrary, the latter are dissatisfied with this interference of the Manufacturers' Association in an affair that does not concern them at all;

"That the imposition of this license had been prayed for by the journeymen plumbers themselves, and that, consequently, the association is ill-advised when it seeks to mix the cause of the workingmen with its own with a view to support some alleged grievances, and,

"That the said license and the examination required of journeymen plumbers have for their object the protection of public health by guaranteeing that plumbing work shall be performed in a suitable manner;

"That the workingmen plumbers desire to assist in the praiseworthy efforts which your honorable council is making with a view to reduce the terrible mortality which all deplore in Montreal, and that they consider with all the physicians and other experts in such matters, that one of the most efficient means of doing so is to require that all plumbing work be executed according to the rules of science, and, consequently, by competent workingmen."

Building Activity in Winnipeg.

THE aggregate of the building permits issued in Winnipeg during the present year which has been steadily leaving all former high-water marks far in arrears, yesterday reached \$8,000,000. There are still many large buildings and a host of smaller ones contemplated which will require permits this Fall which will swell the expenditure to about \$10,000,000. That is the amount Building Inspector Rogers estimated the year's operations at, and

the progress of the year indicates that his figures are very nearly correct.

The amount of permits issued at this same period in 1903 which had constituted a record up to that time was \$5,201,300, and the total for the entire year was \$5,689,400.—Manitoba Free Press, Oct. 8, 1904.

Building Notes.

It is proposed to erect a Collegiate Institute at Peterboro, Ont.

H. and W. Martin are to build a brick block with four stores in Wallaceburg, Ont.

The Nova Scotia Telephone Co. are going to erect a building in New Glasgow, N. S.

A new passenger station is to be erected by the Intercolonial Railway at Pictou, N. S.

The Government is about to erect a new armory building in Peterboro, Ont., to cost over \$100,000.

Tenders for a drill hall for Sarnia, Ont., are invited before Monday, Oct. 31, by Fred Gelinis, secretary Department Public Works, Ottawa.

The plans for the new Fort William, Ont., city hall are to be altered somewhat to allow for an assembly room



We make money for you

because our lines are better at the same price than others and offer greater profits to you. Plumbing Supplies, Gas and Electric Lighting Fixtures, Valves, Brass and Steam Fittings and kindred lines are our specialties.

When in the market get our prices before writing elsewhere.

JAS. MORRISON BRASS MFG. CO., LIMITED
TORONTO, ONT.

with cloak rooms adjoining, which are to be provided with lavatories, etc.

E. J. Lennox, architect, Toronto, invites separate or bulk tenders for all the work on a large office building at 8 and 10 King street west, Toronto.

The Robert Stewart Co., Guelph, Ont., have decided to build a six-room addition to the Guelph Collegiate Institute, and to remodel the present structure at a total cost of \$23,000.

M. Fortune & Co., Winnipeg, are about to erect a new business block on Smith street, Winnipeg, to cost \$30,000; the architect is James Cadham and the contractors Alsip Bros. The construction of the building will be solid brick and stone.

sectional view published herewith. It is fitted with revolving grates, as the water jacket is provided with a double crown the heater is most effective and powerful. In concluding a description of the heater the company say: "These heaters have a large amount of direct fire surface, with deep and roomy fire-pots, insuring the utmost efficiency on slow combustion of fuel. The highest grade of iron is used, with best workmanship, the same as in all our other constructions. We can recommend these heaters to the general heating and plumbing trade, knowing they will be found especially desirable for the purposes referred to."

Building Permits.

TORONTO.

W. W. Hiltz, Bain avenue, \$4,000.
A. Brock, Markham street, \$5,000.
S. J. Graydon, Walker street, \$6,500.
Mrs. M. Pringle, Rose avenue, \$5,000.
T. McCollum, Bathurst street, \$5,000.
G. F. W. Price, Dupont street, \$4,000.
John Walker, Markham street, \$10,000.

Frank Wooten, Ulster and Palmerston, \$6,000.

D. & M. J. Dadden, Markham street, \$5,000.

C. R. S. Dinnick, Bernard avenue, \$53,000.

James Pengally, on North Birtle avenue, \$8,000.

Wm. Davies Co., Limited, store on Sorauren, \$4,100.

T. Eaton, alterations to dwelling, Lowther and Spadina, \$5,000.

L. C. Sheppard, Montrose avenue, St. George and Dupont street, \$24,600.

Trustees St. Paul Presbyterian Church, corner Bathurst street and Barton ave., \$28,000.

QUEBEC.

J. W. Nelson, dwelling, Second avenue, \$1,800.

William Jones, dwelling Queen street, \$1,400.

R. L. Blackburn, dwelling, Crichton street, \$1,500.

Mrs. C. Beauchamp, dwelling, Broad street, \$1,900.

Robert Bennett, dwelling, Gilmour street, \$2,500.

MONTREAL.

F. Nicholson, Joliette street, one house, \$2,500.

F. Tremblay & Co., two houses, \$10,000.

Geo. Marcotte, Moreau street, two houses, \$4,500.

Louis Bayer, Crescent street, two houses, \$8,000.

Alec Robertson, Pine avenue, two houses, \$16,000.

H. Bertrand, St. Andre street, one house, \$2,000.

I. Trudeau, Logan street, two houses, \$3,600.

J. B. Collette, Chateaugay, two houses, \$2,500.

F. C. Tremblay, Aylwin street, two houses, \$4,000.

W. B. Beaubien, Britannia street, one house, \$2,700.

Mrs. Joseph Lemare, St. Catherine street, one house, \$1,800.

Heating and Plumbing Notes.

Paquette & Ganthier, plumbers, Maisonneuve, Montreal, have dissolved.

The activity in plumbing business in Toronto continues. Not only is there an unusual amount of contract work under way, but a pressure of repair work is causing some of the trade trouble in keeping up to their orders.

The scarcity of gas fitters continues to be one of the great problems with which the master plumbers of Chicago have to contend, according to the Plumbers' Trade Journal. At the present time it is a matter of extreme difficulty to secure the service of a gas fitter when needed, as the few who are still working at the trade are generally kept steadily employed.

THE NEW WORKS IN OPERATION.

THE horse shoe nail department of the new works of the Maritime Nail Co., St. John, N.B., were visited by many spectators on the occasion of the resumption of operations. This firm use a machine designed by their manager, Mr. Eben Perkins, which is highly spoken of. The output of the works is about one ton a day, which capacity is to be doubled when all the machinery is completed.

A pretty souvenir of the occasion was given to each of the visitors. It consisted of a small enamelled horse nail with the word "Peerless" engraved on it, formed into a stickpin. Mr. Perkins also showed the workings of the machines for manufacturing wood screws. These machines are the very latest of their kind and were made in Birmingham, England, by a firm of which Hon. Joseph Chamberlain, the apostle of better trade relations with the colonies, is one of the chief members. The company report unusual success in their nail trade. Not only have they a market in Canada from the Atlantic to the Pacific, but they have already introduced their nails in England and other British colonies.



The Gurney Gothic Tank Heater.

Gothic Tank Heaters.

THE Gurney Foundry Co., Toronto, are offering the trade the Gurney Gothic Tank Heaters, which are designed especially for the smaller heating requirements, such as conservatories, small green houses, poultry houses and cottages, also for furnishing water for baths, baptisteries, stables and restaurants, and where a quantity of hot water is desired in apartment houses, barber shops and dwelling houses.

The general detail of construction will be recognized by the trade from the

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tried it?
Tried what?
**SELLING
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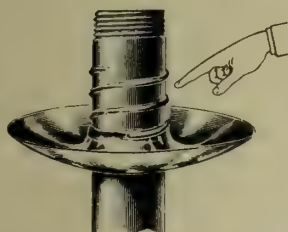


This is in your line of business, and it will
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The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

**THE HOLDFAST
CEILING and FLOOR PLATE**
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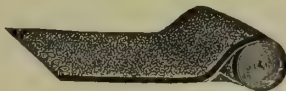
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**A PERMANENT
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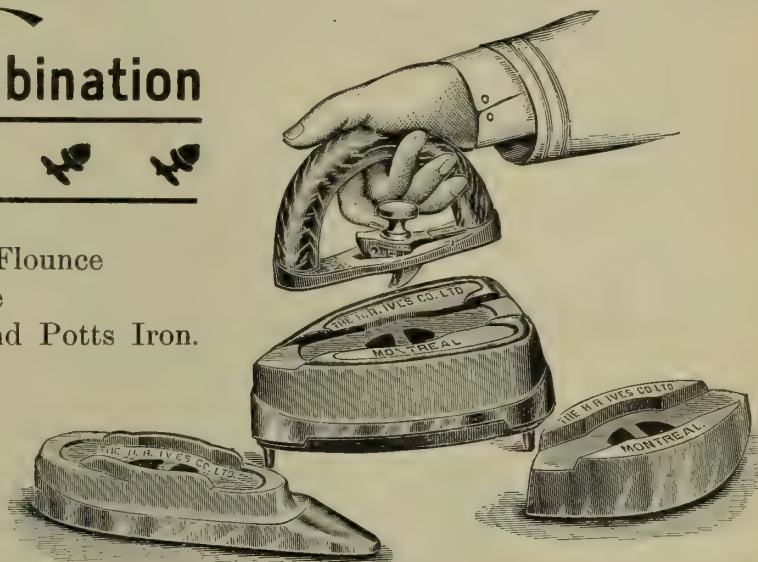
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Will bring you profitable trade and satisfied customers. Comes in rolls ready to
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Sole agents being appointed in each district. Write to-day.

**NEW
Combination
Set**

Pressing, Flounce
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and Potts Iron.



WRITE FOR PRICES

The H. R. IVES CO., Limited, Manufacturers, Montreal



No. 10 - "New Process." Design attractive. Construction first-class.

No. 17 - "Standard." Cheaper in quality, but well proportioned and handsome in appearance, and a strictly up-to-date heater.

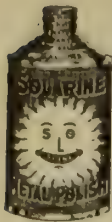
New Process Oil Heaters.

Are absolutely safe.
Produce intense
heat without smoke.
Simple as a lamp in
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**Light
and
Durable**

Founts are remov-
able for Cleaning
and Filling.
Provided with Bail
Handle with which
they can be easily
carried to any part
of the house.

The Thos. Davidson Mfg. Co., Limited
MONTREAL.



3 Selling Lines

Solarine Metal Polish.
Japanese Pipe Varnish
Shino Stove Enamel.

Write for prices.

H. F. FALKNER,
60 George St., TORONTO

Good For Silverware

Black with age or disuse or tarnished by gas. Cleansed instantly, polished beautifully by using

YORK METAL POLISH

(Liquid or Paste)

Send For Free Sample.

Anglo-Canadian Supply Co.
91 Wood St., TORONTO.

OAKEY'S 'WELLINGTON' KNIFE POLISH

The original and only Genuine
Preparation for Cleaning Cutlery. 6d. and 1s. Canisters

JOHN OAKEY & SONS, LIMITED

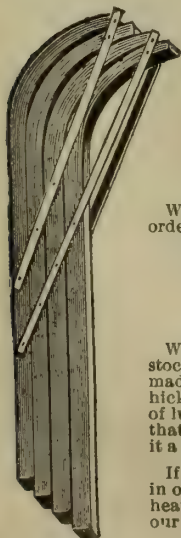
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We are prepared to fill any
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**Heavy Waggon,
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Cutter Stock**

We make a specialty of heavy
stock and can fill orders promptly
made from the best of oak and
hickory as we carry a large stock
of lumber and can make any sizes
that may be required. We make
it a point to fill orders promptly.

If you are in need of anything
in our line we will be pleased to
hear from you and we will give it
our prompt attention.

Bob Sleigh and
Long Runners

J. S. Loughead & Son
Sarnia Ontario

STOVES AND TINWARE.

Troubles of the Stove Man.

"HAVING just experienced some annoyance as the result of one of my workmen not having all the experience which has come to me in a long connection with the stove trade, it struck me that the lecture I gave him might be of benefit to many other stove and furnacemen and workmen," writes O. N. E. in the Metal Worker. "One-half of the troubles in the stove trade come from the chimney, and a little common sense applied to the consideration of its peculiarities would overcome many of these troubles. If the workman will once absorb the idea that all the air that goes out of the top of the chimney should come into it only through the stove, range, parlor heater or hot air furnace which is connected at the bottom of it he would have a plan of action that would lead to the successful remedy of many of the complaints that are brought to his attention. This would lead him to see that where the pipe enters the chimney a tight connection is made. Sometimes the stove pipe is shoved into a hole in the chimney without a collar being placed around it, or any other effort being made to prevent air going in all around the 5-inch pipe that is used in a 6-inch hole. In chimneys of poor draft the amount of air that will enter under such conditions will be sufficient to interfere with the operation of any kind of stove that is connected with it, and as soon as this opening is stopped up the stove may operate in a perfectly satisfactory manner. Under some conditions the gases which enter the chimney drop down instead of going up, and this can be avoided by cutting away the upper half of the piece of pipe that enters the chimney the width of the inside of the chimney and pushing the pipe into the chimney until the end is stopped by the back side. Under such conditions the smoke and gases cannot fall, but will naturally start upward.

"What has already been said should be enough to make a stove man understand that loosely fitted pipe is enough to force those who operate the stove to suffer from causes they know nothing of, and stove pipe is too cheap in these days

to annoy the housewife with the poor service of a cooking stove improperly connected. It is poor practice to use small stove pipe, particularly on cooking stoves. In my experience some advantages have been derived in difficult cases by using a stove pipe one size larger than the collar on the stove. Certainly, wherever a stove is giving trouble and has a tapering joint from the full size to a smaller size, the small pipe should be taken away and a full sized pipe used from the stove to the chimney.

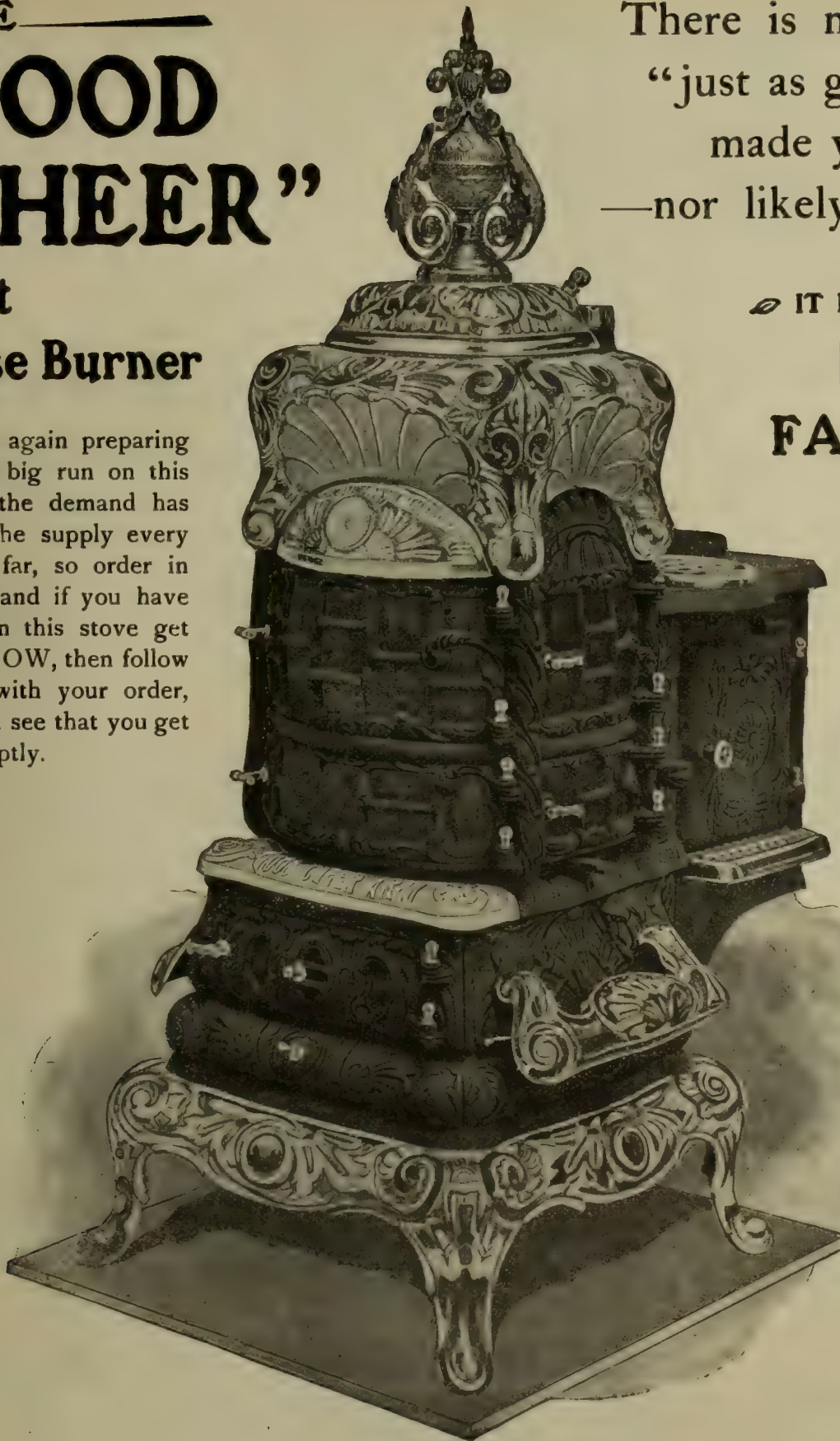
FIRE CHAMBER TROUBLES.

"Sometimes trouble comes from the fire chamber, from the disarrangement of the grates, fire pots, etc. In a parlor heating stove, where a round cast iron fire pot is hung in a frame, it is possible at times for this fire pot to be displaced so that air can pass up all around the outside of the fire pot to supply the chimney draft without going through the fire, which makes the fire burn sluggishly, if it burns at all. The same trouble is found in cooking stoves. Often the grates or fire brick become displaced so that air can enter the flues without passing through the fuel, under which circumstances the fire is sluggish and it is impossible to bake. With inexperienced people it is almost impossible to get them to understand that when the top of the cooking stove is red hot it is the best evidence possible that something is wrong with the draft; otherwise this intense and excessive heat would be carried around and under the oven where it is most needed, and the only way to make this stove operate and draw is to find the cause of this lack of draft and remedy it, whether it be that the pipe is too small or that openings in the chimney have been overlooked. It may happen that a pipe hole in a room on the second floor or a clean out opening in the bottom of the chimney is left uncovered. Occasionally there is an accumulation in the chimney caused by some of the soot or materials falling down and lodging at some point, thus reducing the size of the chimney. Sometimes the top of the chimney is not as high as a surrounding building, which may have recently been erected, and this exerts a depressing influence on the

THE "GOOD CHEER"

Art Base Burner

We are again preparing for another big run on this stove, but the demand has exceeded the supply every season so far, so order in good time, and if you have not yet seen this stove get a sample NOW, then follow up quick with your order, and we will see that you get them promptly.



There is nothing
"just as good"
made yet
—nor likely to be.

IT HAS
**NO
FAULTS**

Firepot removable
without turning a
single bolt.

Has Duplex Grate
and large ash pan.

Every stove a
Double Heater.

Has Steel Oven.

With or without
oven.

The JAMES STEWART MFG. CO., Limited
Woodstock, Ont. and Winnipeg, Man.

smoke that should escape from the top of it. These are just a few of the things which a stove man will do well to look for at this season of the year.

PARLOR HEATER TROUBLES.

"I also find in houses in which the doors are kept closed between the different rooms that complaints come from those who use a parlor heater with a hot air pipe leading from it to a register in a room in the floor above. If the doors and windows of the upper room are kept closed it will not be long before it will be impossible to force any more hot air into the room, and the room will cool off, instead of getting warmer, on a cold day. If a thimble is used around the pipe leading to the register, and the register is so constructed that air can pass down from the upper room to the lower one and keep up a circulation, there is no trouble. If the heater is connected without any such provision and the upper room fails to heat, opening a door so as to allow the air in

the room to escape will often hasten the entrance of warm air until the room is raised to a comfortable temperature. Sometimes a second register is used alongside of the warm air register, and ornamental face plates used both on the ceiling in the lower room and in the floor above. This permits a circulation of air.

FURNACE TROUBLES.

"It is not uncommon for the damper or shut off in the cold air supply duct to

hot air furnaces to be closed in the Summer season, and, when the fire is started up in the Fall, failure to open this supply damper prevents some of the hot air pipes getting their proper air supply and causes the air in some of the rooms to pass down to the furnace to be sent up through the other hot air pipes to registers in other rooms. A furnace must have a supply of air, and more furnaces suffer from too little cold air supply than from too much."



Asbestos Furnace Cement

Incomparably better than any other Cement on the market. Money back if not perfectly satisfactory.

Why It Is Better

than others: Always ready for use; sets in few hours; vitrifies without shrinking or becoming porous; odorless; keeps soft longer, gets harder, stands more heat, than any other cement made; fire and acid proof; is grey or casting color, and shows no objectionable streaks after being mounted. Send for circular and price list.

G. F. STERNE & SON, Sole Makers, Brantford, Ont.

J. H. Hanson, 422 St. Paul St., Montreal, Eastern Agent.

GRAND IDEA

The Range that Never Fails.

GRAND IDEA RANGES have made such a record for themselves that they will remain in the front rank for many years to come. They were a SUCCESS from the start, and to-day stand UNEQUALLED on the CANADIAN MARKET.

DEALERS who have handled the GRAND IDEA are unanimous in their verdict—"IT'S THE BEST RANGE ON EARTH."

GRAND IDEA RANGES are popular because they are very economical on fuel and will bake perfectly more material with less fuel than any range yet produced. Their BEAUTY OF DESIGN, DURABILITY, EFFICIENCY, AND SIMPLICITY OF OPERATION make them easy sellers.

GRAND IDEA RANGES will SATISFY YOUR TRADE. GET ACQUAINTED with this line. IT WILL PAY YOU.

GUELPH FOUNDRY CO.
Limited
Guelph, Ont.

Western Representatives:

Messrs. E. G. LOW & CO..

Market Street, - Winnipeg, Man.



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Cut Book 26

Page 12
etc.

To Manufacturers' Agents:

HARDWARE AND METAL has enquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of enquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager

HARDWARE AND METAL

Montreal and Toronto



"FIRE"
WILL NOT SPREAD, AND SPARKS OR CINDERS HAVE NO EFFECT ON

REX Flintkote Roofing.

It is the most fire-resisting roofing known, and it is endorsed by fire underwriters everywhere as possessing the most fire-resisting qualities. On this account, especially, it is fast replacing shingles and becoming the universal roofing. It is durable, waterproof, economical, and anyone can lay it. Our samples and book that tells all about roofing is yours for the asking.

J. A. & W. BIRD & CO.,
47 India Street, Boston, Mass.

"LOOK FOR THE BOY" ON EVERY ROLL

PIPE THAT IS PIPE.

THIS IS OUR BRAND

P-H

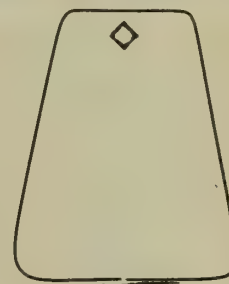


You Want It.

See that You Get It.



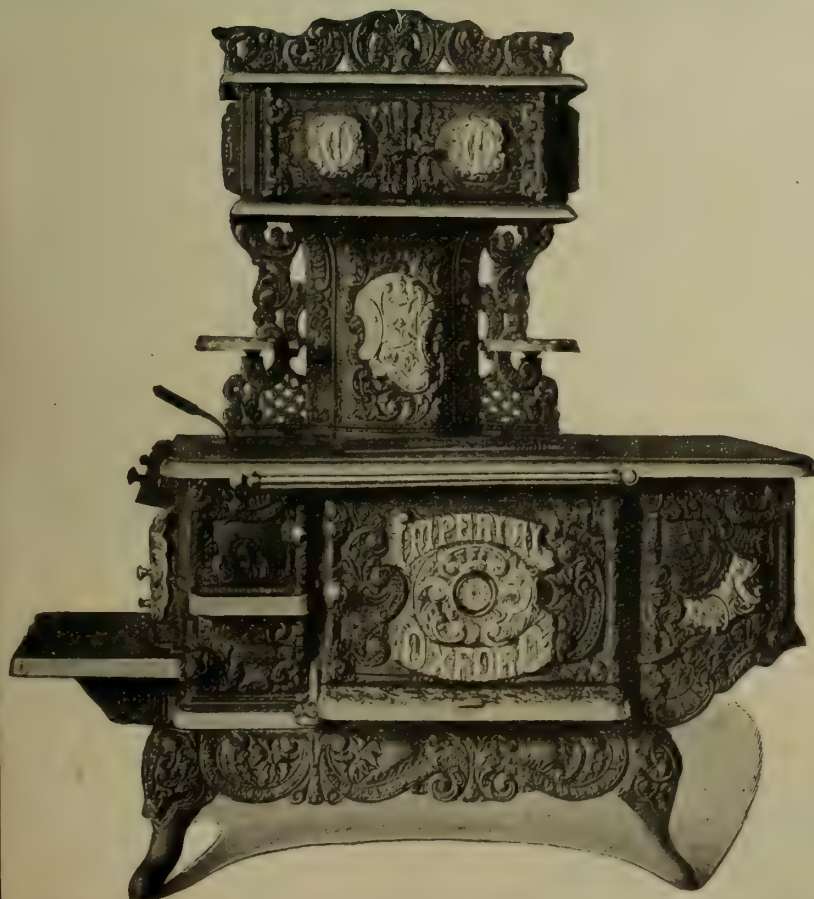
THIS IS OUR TAG.



TAKE NO OTHER.

BLACK AND GALVANIZED.

PAGE-HERSEY IRON AND TUBE CO., LIMITED, GUELPH, CANADA



The best stove merchants in each district represent us and sell the

Imperial Oxford Range

because they know it is the best range known and the best known range. Perhaps you would like to be our agent in your district?

Write us about it.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP

Warren White Sulphur Springs,
Totten P.O., Virginia.

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish
Chemical and Drysaltory Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.

SOOTT, GREENWOOD & CO.

19 LUDGATE HILL - LONDON, ENG.

Order a stock of

"Windmill Best" Galvanized Sheets

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, - Montreal

**DON'T INVITE TROUBLE**

By Buying Imitation FIRE, Water, Dust and Air-Proof SKYLIGHTS. **BUY THE GENUINE.** Our pamphlet will tell you about "OUR IMPROVED."

Manufacturers and Contractors
of

Metal Fireproof Windows CORRUGATED IRON

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

A. B. ORMSBY LIMITED,

Cor. Queen and George Streets,
TORONTO, ONT.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE annual report of the Granby Consolidated Mining, Smelting & Power Co., Limited, Granby, B.C., shows an increase in production of over 3,473,000 tons. Gross receipts were increased by \$695,095, but operating expenses were larger by \$707,879. After the deduction of dividends there was a surplus of \$149,884, as compared with a surplus of \$296,298 of the year before.

NOTES.

A new Marconi station is to be erected near Port Morien, N. S.

A new bridge is to be constructed across the Welland Canal on the line of the Welland division of the G. T. R.

A steel bridge is to be erected across the Talfourd Creek near the Sarnia Indian Reserve.

The Alaska Feather & Down Co., Montreal, have let a contract for the erection of solid brick warehouse and factory on Princess street, Winnipeg.

The Town Council of Glace Bay, N.S., is considering the expenditure of \$15,000 for additional electric light machinery, and \$10,000 for the building of a brick power house.

COMPANIES INCORPORATED.

The D. H. Thompson Co., Limited, Toronto; capital, \$100,000; purpose, to manufacture and sell caskets, coffins and parts. The directors are: P. J. Smith, J. Dechert and P. Endress, all of Toronto.

The Niagara Quarry Co., Limited, Orillia; capital, \$40,000; purpose, to quarry, manufacture and sell all kinds of stone. The directors are: J. B. Tudhope, W. H. Tudhope, Wm. Thomson, Geo. Thomson and A. Craig, all of Orillia.

Commercial Publishers, Limited, Toronto; capital, \$200,000; purpose, to carry on a publishing business. The directors are: C. B. Murray, A. W. Holmsted, Jas. Milne, F. W. Holmsted and D. A. Brebner, all of Toronto.

Cast Stone & Supply Co., Limited, Hamilton; capital, \$100,000; purpose, to manufacture building blocks from cement and other substances. The directors are: M. C. Pigott, J. H. Tilden, A. Zimmerman, J. M. Harris, H. P. Coburn, T. J. Stewart and H. Carscalen, all of Hamilton.

Imperial Hardware Mfg. Co., Limited, Toronto; capital, \$40,000; purpose, to manufacture and sell, wholesale and retail, hardware of all kinds, and to carry on a general foundry, wood and metal working business. The directors are: S. Fader, E. J. H. Pauley and H. H. Earl, all of Toronto.

National Cultivator Co., Limited, Windsor, Ont.; capital, \$100,000; purpose, to manufacture implements of trade and husbandry. The directors are: A. H. Clarke, P. A. Dewar, F. Hutton, E. I. Scully, all of Windsor; and Wm. McCloskey, Maidstone Township, Essex County.

The Brantford Felt & Rubber Co., Limited, Brantford; capital, \$100,000; purpose, to deal in and make all kinds of rubber, gutta percha, leather, felt, woolen, cotton and shoddy goods. The directors are: J. F. Martin, J. P. Bell, T. W. Frank, J. H. Ham and R. E. Ryerson, all of Brantford.

Haskel Lumber Co., Limited, Monte Bello, Quebec; capital, \$400,000; purpose, to carry on a lumbering and manufacturing business. The directors are: W. L. Haskel, Ulysses, Pa.; M. S. Haskel, Herring, Pa.; C. Adsit, Hornellsville, N. Y.; D. R. Cobb, Syracuse, N. Y.; J. N. Peck, Philadelphia, Penn., and G. W. Thayer, Rochester, N. Y.

Canadian Lead Co., Limited, Toronto; capital, \$1,000,000; purpose, to carry on the business of mining, milling, smelting and otherwise disposing of galena and other metals and minerals. The directors are: W. H. Eccles, H. A. Bonter, J. H. Varnplew, N. Sinclair and F. Morison, all of Toronto.

The Lake Shore Natural Gas Co., Limited, Fort Erie, Ont.; capital, \$5,000; purpose, to construct and operate works for the production and distribution of natural gas and electricity. The directors are: J. F. Foster, Buffalo; H. W. Wendt, G. A. Jackson and A. B. Armstrong, all of Wentworth County, Ont.

New York-Lake Erie Oil & Gas Co., Limited, Windsor; capital, \$1,000,000; purpose, to explore, drill and operate for petroleum oil, natural gas and salt, and to sell or otherwise dispose of same. The directors are: J. W. Lovell and A. W. Lovell, both of Pelee Township; A. H. Clarke, A. R. Bartlet and A. W. MacGregor, all of Windsor.

CHARLES BAYNES, England.
 MAKER OF THE **KNUZDEN BROOK, BLACKBURN,**
"CLICK-CLACK"
HACK SAW BLADES.
 In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited

HANOVER, ONTARIO.

Manufacturers of **"Saugeen Brand"**
 the Celebrated **OF PORTLAND CEMENT.**

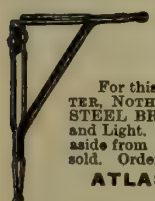
Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export. With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— **Emlyn Engineering Works**
 "Machinery," Newport. **NEWPORT, MON., ENGLAND**



Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the **BRADLEY STEEL BRACKET.** It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,

New Haven, Conn., U.S.A.

Books for Hardware Men

The American Hardware Store.

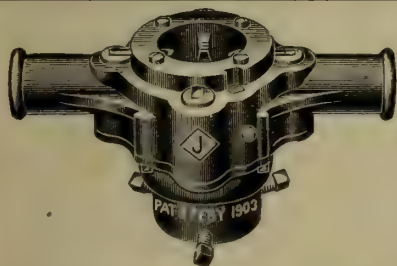
By R. R. Williams; 576 pages; 6¼ x 10 inches; 660 illustrations; bound in cloth\$3.00

Hardware Store Business Methods.

A series of articles dealing with business methods in the hardware store, by different authors; 227 pages; 5½ x 8 inches; illustrated; cloth binding.....\$1.00

Enquiries for above books should be sent to

Book Department, **HARDWARE AND METAL**
TORONTO.



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain **HOW** and **WHY.**

A. B. JARDINE & CO.

Mfrs. **TAPS** and **DIES.**

HESPELER, ONT.



This design a guarantee of quality

WRAPPING PAPERS

ALL GRADES, AND BEST OF EACH
 GREY, RED-BROWN, MANILLA, FIBRE, TEA, ETC.

SAMPLES AND PRICES
 FOR THE ASKING.

CANADA PAPER CO.
 TORONTO LIMITED MONTREAL

The Wires Are Fast

—They can't possibly come loose until the very end of everything.

Cutt's Metal Ash Sifter

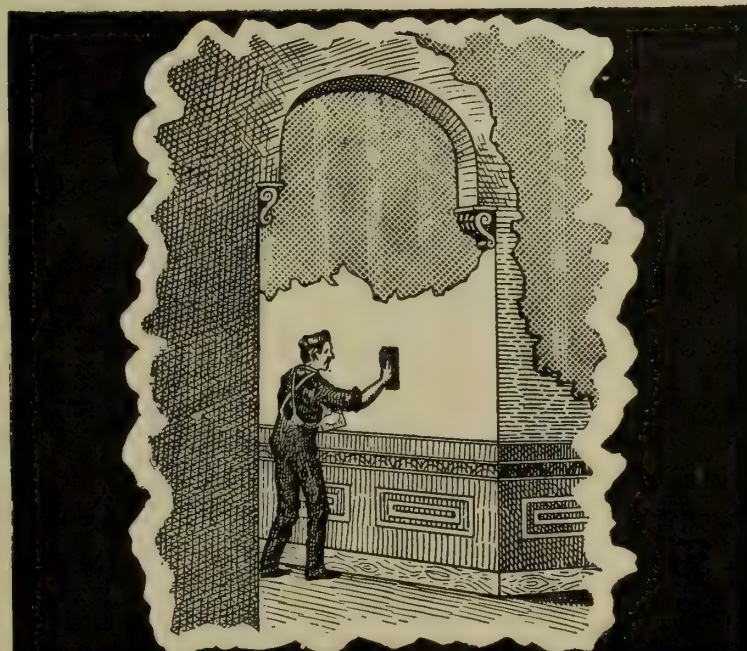
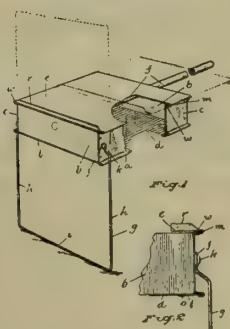
is a "find." No wood, and is everything a sifter ought to be.

Can be Retailed at 25c.

Order Sample Dozen.

C. M. CUTTS & CO, Toronto Junction, Ont.

Pat. in Canada, May 17, '04. U.S. Pat. allowed.



Pedlar's "Perfect" Metal Lath

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.

24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)


Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.

WE TALK QUALITY WITH CONFIDENCE

because we know that our

Ready Roofing, Sheathing and Black  Diamond Tarred Felts,
Building Papers, Fibre and Manilla Wrappings, etc.,
are unexcelled.

Ask for our quotations—they will interest you.

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLIETTE, QUE.

ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET, - MONTREAL

CURRENT MARKET QUOTATIONS.

Oct. 14, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TIN PLATES.

Charcoal Plates—Bright. Per box.
I.C. usual sizes. \$6 50
I.X. " 8 00
I.X.X. " 9 50
Famous, equal to Bradley—
I.C. 6 75
I.X. 8 25
I.X.X. 9 75

Raven and Vulture Grades—
I.C. usual sizes. 4 25
I.X. " 5 00
I.X.X. " 5 75
I.X.X.X. " 6 50

"Dominion Crown Best"—Double
Coated, Tinned. Per box.
I.C. 5 50
I.X. 6 50
I.X.X. 7 50

Allaway's Best—Standard Quality.
I.C. 4 50
I.X. 5 50
I.X.X. 6 50

Coke Plates—Bright.

Essex Steel—
I.C. usual size, 14x20 3 35
I.C. special sizes, base 3 60
20x28 7 10

Dean or J. G. Grade—
I.C. 20x28, 112 sheets 7 50
I.X. Terne Tin 10 50
Charcoal Tin Boiler Plates.

Cookley Grade—
X.X. 14x56, 50 sheet bxs. 7 00
14x60.
14x65.

Tinned Sheets.
72x30 up to 24 gauge. 7 25 7 50
26 7 75 8 00

IRON AND STEEL.

Common bar, per 100 lb. 1 80
Redned " 2 20
Horseshoe Iron " 2 25
Hoop steel, 1 1/2 to 3-in. base 2 75
Sleigh shoe steel, 0 75
Tire steel " 2 30 2 50
T. Firth & Co.'s tool steel, per lb. 0 12 1/2 0 13

B. K. Morton & Co.—
"Alpha" tool steel. 0 70
"M" Self-Hardening. 0 60
"J" Standard. 0 14

Classes high speed steel. 0 16
" standard tool steel. 0 14
" crucible steel. 0 14
Chas. Leonard's tool. 0 08 0 09

Crucible Steel Co.
"Black Diamond. 0 10 0 11
" Silver steel. 0 13
" Special. 0 17
" Rex high speed steel. 0 65 0 75
" Self-Hardening. 0 45 0 50

Sanderson's Crucible Tool. 0 03 0 09
" Superior " 0 12 0 13
" Extra Anil. 0 15
" Self-Hardening. 0 45 0 50
" Rex high speed. 0 65 0 75
Jonas & Colver's tool steel. 0 10 0 20
" Air Hardening. 0 70

Drill steel, per lb. 0 08 0 10

RABBIT METAL.

"Tandem," A. per lb. 0 27
" B. " 0 21
" C. " 0 11 1/2
Frictionless Metal. " 0 23
Syracuse Smelting Works:
Aluminum, genuine. 0 45
Government, " 0 44
Tough, " 0 40
Hard, " 0 40
Dynamo. 0 30
Special. 0 25
Harmony. 0 22
Car Box. 0 20
Extra. 0 15

The Canada Metal Co.:

Imperial, genuine. 0 40
Metallic. 0 30
Hercules. 0 20
Star. 0 15
No. 1. 0 12
No. 2. 0 10
No. 3. 0 06
No. 4. 0 05

Geo. Langwell & Son.

No. 1. 0 08
No. 2. 0 07
No. 3. 0 05 1/2
Extra. 0 09 1/2

BLACK SHEETS.

Montreal. Toronto.
10 and 16 gauge. 2 25 2 50
18 gauge. 2 30 2 50
20 " 2 30 2 50
22 to 24 gauge. 2 35 2 70
26 " 2 40 2 80
28 " 2 40 2 90

Discount, 50 per cent.

COPPER WIRE.

Ordinary. 2 50
All bright. 3 50
Galvanized Canada Plates—

Ordinary. Dom. Crown.
18x24x52. 4 25 4 35
60. 4 50 4 60
20x28x80. 8 50 8 70
94. 9 00 9 20

GALVANIZED SHEETS.

Queen's
Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge. 3 65
18 to 24 gauge. 3 75 3 50 3 75 3 75
26 " 4 00 3 75 3 90 4 00
28 " 4 25 4 00 4 05 4 25

American brands, \$4.00 for 10 1/2 oz.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
Tie out chains. 65 p.c. 5 60
" 3-16 " 4 45
" 7-16 " 3 85
" 7-16 " 3 70
" 9-16 " 3 55
" 9-16 " 3 45
" 9-16 " 3 35
" 9-16 " 3 25
Halter, kennel and post chains, 40 to 40 and 5 per cent.
Cow ties. 40 p.c.
Tie out chains. 65 p.c.
Stall fixtures. 35 p.c.
Trace chain. 45 p.c.
Jack chain, iron, single and double, discount 35 p.c.
Jack chain, brass, single and double, discount 40 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots. 13 75
Bars.
Cut lengths, round, 1/2 to 1 in. 21 00 23 00
" round and square, 1 to 2 inches. 21 00 23 00

Sheet.

Plain, 16 oz., 14x48 and 14x60. 20 00
Plain, 14 oz. 21 00
Tinned copper sheet. 24 00
Planished. 32 00

Braziers (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 " 0 21
" 50-lb. and above " 0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb. 0 28
Spun, per lb. 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4. 0 23
Tubing, base, per lb. 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb. 6 00 6 25
Domestic " 5 50 5 75

ZINC SHEET.

5-cwt. casks. 6 15 6 50
Part casks. 6 50 7 00

LEAD.

Imported Pig, per 100 lb. 3 20 3 30
Bar, per lb. 0 05
Sheets, 24 lb. sq. ft., by roll. 0 06 1/2
Sheets, 3 to 6 lb. 0 06

NOTE.—Cut sheets 1/2 c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's. per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck seal and ball, \$7.50. Discount, 17 1/2 p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax. Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.
Zinc. 6 00
Copper, discount 20 per cent. off revised list.

BATHS.
Standard Ideal Enameled.
5 1/2 ft. 2 1/2 in. rolled rim, 1st quality. 21 25
5 1/2 " 2nd " 17 25

CLOSETS.
Fittings. 1 00
Plain Simplex Syphon Jet. 9 00
Emb. 9 50

Fittings. 1 25
Low Down Elgin or Feutonic, plain. 6 00
Low emb. 6 50

Connection. 1 25
Plain Richelieu. 4 25
Emb. 4 50

Connections. 1 25
Basins, P.O., 14-in. 0 63
Basins, oval, 17 x 14-in. 1 50
Basins, " 19 x 15-in. 2 00

IRON PIPE.

Black pipe— Per 100 feet.
1/2 inch. 1 97
3/4 " 2 15
1 " 2 28
1 1/4 " 2 86
1 1/2 " 4 10
2 " 5 62
2 1/2 " 6 72
3 " 8 98

4 " 10 10
4 1/2 " 11 10
5 " 12 10

Galvanized pipe— Per 100 feet.
1/2 inch. 1 97
3/4 " 2 15
1 " 2 28
1 1/4 " 2 86
1 1/2 " 4 10
2 " 5 62
2 1/2 " 6 72
3 " 8 98

4 " 10 10
4 1/2 " 11 10
5 " 12 10

Galvanized pipe— Per 100 feet.
1/2 inch. 1 97
3/4 " 2 15
1 " 2 28
1 1/4 " 2 86
1 1/2 " 4 10
2 " 5 62
2 1/2 " 6 72
3 " 8 98

4 " 10 10
4 1/2 " 11 10
5 " 12 10

Galvanized pipe— Per 100 feet.
1/2 inch. 1 97
3/4 " 2 15
1 " 2 28
1 1/4 " 2 86
1 1/2 " 4 10
2 " 5 62
2 1/2 " 6 72
3 " 8 98

Galvanized pipe—

1/2 inch. 2 80
3/4 " 2 86
1 " 3 14
1 1/4 " 4 01
1 1/2 " 5 75
2 " 7 45
2 1/2 " 9 43
3 " 12 57

Malleable Fittings—Discount 20 p.c.

Cast Iron Fittings—
Standard, 57 1/2 per cent.; unions, 55 per cent.; on nipples, headers and flanged unions, 60 per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dis. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.

6 dozen lots and over of the above, extra discount 10 per cent.

Lever handle Stops and Waste, discount 60 per cent. With in lots of 2 dozen and over an extra discount of 10 per cent.

J.M.T. Globe, Angle and Check Valves, discount 55 per cent.

Standard Globe, Angle and Check Valves, discount 65 per cent.

Kerr's special standard globes and angles, discount 60 per cent.

Kerr's Jenkin disc, copper-alloy disc and heavy standard valves, discount 60 per cent.

Kerr's standard brass checks, discount 60 p.c. Kerr's standard brass disc steam radiator valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radiator valves, discount 70 per cent.

Kerr's quick-opening hot-water radiator valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate valves, I.B.B.M., discount 70 per cent.

J. M. T. Radiator Valves discount 55 per cent. Standard Radiator Valves, discount 65 per cent.

Patent Quick-Opening Valves, discount 70 per cent.

No. 1 compression bath cock. net 1 75
No. 4 " " 1 90
No. 7 Fuller's " " 2 10
No. 4 1/2 " " 2 25

Patent Compression Cushion, basin cock, hot and cold. per doz. 15 00
Patent Compression Cushion, bath cock, No. 2208. 2 25

Square head brass cocks, discount 55 per cent. iron " 50 to 60 " 25 00
Thompson Smoke-test Machine \$25.00

RANGE BOILERS.

Copper, 30 gallon. " 22 00
" 35 " " 24 00
" 40 " " 28 00

Discount off copper boilers 15 per cent.

SOLD PIPE AND FITTINGS.

Light soil pipe, discount, 50 per cent.
" " fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60 per cent.
and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.

Bar, half-and-half, guaranteed. 0 18
Bar, half-and-half, commercial. 0 17

WRENCHES.

Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Geo's Genuine, discount 20 to 25 per cent.

Towers' Engineer. each 2 00 7 00
" " per doz. 5 80 6 00
G. & K.'s Pipe. " 3 40
Burrell's Pipe. each 3 00
Pocket. per doz. 0 25 2 90

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity 4c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
" umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
French green	5 50
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators Pure	4 75
Monarch	5 00
Decorators Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs,		4 75
No. 1, 560 lb. casks, per cwt		4 00
No. 1, 100 lb. kegs, per cwt		4 25

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
" British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
" Thistle	1 40
" Outside, bbls	0 55
Island City House Paint	1 25
" Floor	1 25
Sterling House Paint	1 20
" Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
" rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
" No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
" orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
" black japan	1 10	1 20
" No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	2 00
Granitine floor finish, per gal.	2 75	
Maple Leaf coach enamels: size 1, \$1.20; size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, case, from 1 to 1 gal., \$2.50.	assorted	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine		
Strip	0 18	0 20
Coopers	0 19	0 20
Hutner		
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
" American \$2.00 per 1000.	
C. B. Caps American, \$2.60 per 1000.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 20 per cent. to list. B.B. Caps, discount 40 per cent. American.	
Central Fire Pistol and Rifle, list net Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American 10 per cent. advance on list.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount. American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—Per M.	
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.

Woodyatt Hudson, per doz., net 4 50

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.

Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit, " "	10 00 18 00
Bench Axes, 40 per cent.	
Hunters' Axes, 25 per cent.	
Boys' Axes	5 50 6 00
Splitting Axes	6 25 7 00
Handled Axes	7 00 12 00
" "	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys', handled	5 75
" hunters'	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.

Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.

Brass, 60 per cent.

Nickel, 55 per cent.

Cow.

American make, discount 63½ per cent.

Canadian, discount 45 and 50 per cent.

Door.

Gongs, Sargent's 5 50 8 00

Peterboro', discount 50 and 10 per cent. off new list.

Farm.

American, each 1 25 3 00

House.

American, per lb. 0 35 0 40

BELLOWS.

Hand, per doz. 3 35 4 75

Moulders, per doz. 7 50 10 00

Blacksmiths', discount 47 per cent.

BELTING.

Extra, 60 per cent.

Standard, 60 and 10 per cent.

No. 1, not wider than 6 in., 60, 10 and 10 per cent.

Agricultural, not wider than 4 in., 75 per cent.

BITS.

Auger.

Gilmour's, discount 60 per cent.

Rockford, discount 50 and 10 per cent.

Jennings' Gen., net list.

Car.

Gilmour's, 47½ per cent.

Expansive.

Clark's, 40 per cent.

Gimlet.

Clark's, per doz. 0 65 0 90

Diamond, Shell, per doz. 1 00 1 50

Nail and Spike, per gross 2 25 5 20

BLIND AND RED STAPLES.

All sizes, per lb. 0 07½ 0 12

BOLTS AND NUTS.

Carriage Bolts, common (\$1 list)

 " 3-16 and ½" 60 and 10

 " 5-16 and ¾" 55 and 5

 " 7-16 and up 55 and 5

 " full sq. (\$2.40 list) 60

 " Norway Iron (\$3 list) 60

Machine Bolts, all sizes, ½ and less 60 || Machine Bolts, 7-16 and up | 60 |
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb.	5½ to 6c.

BOOT CALKS.

Small and medium, ball per M. 4 25

Small heel " " 4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.

BUTCHERS' CLEAVERS.

German	per doz.	6 00	9 00
American	"	12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 46
Oiled Sheathing	" 400 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof " small packages	" 0 25
Refined Tar	per barrel 5 00
Coal Tar	less than barrels per gal. 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 00

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.9 or 2-inch

BUTTS.

Wrought Brass, net revised list.

Cast Iron.

Loose Pin, discount 60 per cent

Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.

Loose Pin, discount 65, 10 and 2½ per cent.

Berlin Bronzed, discount 70, 70 and 5 per cent

Gen. B. bronzed per pair 0 40 0 68

CARPET STRETCHERS.

American per doz. 1 00 1 50

Bullard's " " 6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.

Plate, discount 52½ to 57½ per cent.

CATTLE LEADERS.

Nos. 32 and 33 per gross 7 50 8 50

CHALK.

Carpenters' Colored, per gross 0 45 0 75

White lump, per cwt. 0 60 0 65

Red " " 0 05 0 06

Crayon, per gross 0 14 0 18

CHISELS.

Socket, Framing and Firmer.

Broad's, discount 60 and 10 per cent.

Warnock's, discount 50 and 10 per cent.

P. S. & W. Extra, discount 60 and 10 per cent.

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,

 " " " per doz. \$4 00

 " " " 25c. pkgs., " 2 00

 " " " 10c. " 75

 " " " 25-lb. pall, each 1 80

Poultry Foods, 25c. packages 1 25

Cough Powders, per doz. 1 25

Worm " " 1 25

International 1 Stock Foods, \$1 packages,

 per doz. 8 00

International Stock Foods, per pall 2 75

 " " " per bbl. 10 50

 " " " Poultry " \$1 pkgs., per doz. 8 00

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.			GAUGES.			Clothes line, No. 61..			0 00	0 70	Cabinet.						
American, discount 62½ to 65 per cent.			Marking, Mortise, Etc.			Harness.....			0 60	12 00	Eagle, discount 30 per cent.						
CONDUCTOR PIPE.			Stanley, discount 50 to 55 per cent.			Hat and coat.....			per gro.	1 10	10 00	Padlocks.					
Plain or Corrugated.			Wire Gauges.			Chandelier.....			per doz.	0 50	1 00	English and Am.....					
2-inch.....			per 100 feet	3 00	Winn's, Nos. 26 to 33.....	each	1 65	2 40	Wrought hooks and staples			Canadian dis-	Eagle, discount 20 to 25 per cent.				
3 ".....			"	4 00	GILLET'S POWDERED LYE.				Wire.			MACHINE SCREWS.					
4 ".....			"	5 25	1-case, \$3.70; 3-case, \$3.60; 5-case and over,				Hat and coat, discount 60 per cent.			Iron and Brass.					
5 ".....			"	6 75	\$3.50.				Belt.....			Flat head, discount 25 per cent.					
6 ".....			"	9 00	HALTERS.				Screw, bright, discount 60 per cent.			Round head, discount 20 per cent.					
CRADLES, GRAIN.					Rope, ½-inch.....			per gross	12 00	"C" brand, 40, 10 and 7½ per cent. off list			MALLETS.				
Canadian, discount 20 to 25 per cent.					Rope, ¾ to 1-inch.....			"	14 00	"M" brand, 55, per cent.			Tinsmiths'.....				
CROSSCUT SAW HANDLES.					Leather, 1-inch.....			per doz.	4 00	Countersunk, 57½ per cent.			Carpenters', hickory,.....				
S. & D., No. 3.....			per pair	0 17½	Leather, 1½".....			"	5 20	"Monarch," 50 and 7½ per cent.			Lignum Vitae.....				
S. & D., " 5.....			"	0 22½	Web.....			"	2 45	"Peerless" 50 per cent. dis.			Caulking, each.....				
S. & D., " 6.....			"	0 15	HAMMERS.				HORSESHOES.			MATTOCKS.					
Boynton pattern.....			"	0 20	Nail.				F.O.B. Montreal			Canadian.....					
DOOR SPRINGS.					Maydole's, discount 5 to 10 per cent. Canadian				No. 2			No. 1	per doz.				
Torrey's Rod.....			per doz.	1 75	discount 25 to 27½ per cent.				and			larger.	5 50				
Coil, 9 to 11 in.....			"	0 95	Tack.				Iron Shoes.			6 00					
English.....			"	2 00	Magnetic.....			per doz.	1 10	1 20	J light, medium and heavy....			3 65			
DRAW KNIVES.					Canadian.....			per lb.	0 07½	0 08½	snow shoes.....			3 90			
Coach and Wagon, discount 50 per cent.					Sledge.						Steel Shoes.			4 15			
Carpenters' discount 60 and 10 per cent.					Ball Pean.						XL, sizes 1 to 5.....			5 35			
DRILLS.					English and Canadian, per lb.			0 22	0 25		Light, No. 2 and larger.....			3 80			
Hand and Breast.					HANDLES.						No. 1 and smaller.....			4 05			
Miller's Falls, per doz., net list.					Axe, 2nd growth, per doz. net			3 00	4 00		Featherweight, all sizes 0 to 4.....			5 35			
DRILL BITS.					Store door.....			per doz.	1 00	1 50	Toeweight, all sizes 1 to 4.....			6 60			
Standard, discount 50 and 5 to 55 per cent.					Fork.						JAPANESE WARE.			50 per cent.			
FAUCETS.					C. & B., discount 40 per cent., revised list.						IOE PICKS.						
Common, cork-lined, discount 35 per cent.					Hoe.						Star.....			per doz.			
EAVETROUGHS.					C. & B., discount 40 per cent., revised list.						KETTLES.						
10-inch.....			per 100 ft.	10 00	Saw.						Brass spun 7½ per cent. discount off new list.						
ELBOWS (stovepipe.)					American.....			per doz.	1 00	1 25	Copper.....			per lb.			
5 and 6-inch, common.....			per doz.	1 20	Plane.						American, 60 and 10 to 65 and 5 per cent.			0 30			
7-inch.....			"	1 35	Hammer and Hatchet.						KEYS.			0 50			
Polished, 15c. per dozen extra.					Canadian, discount 40 per cent.						Lock, Canadian dis. 40 to 40 and 10 per cent.			0 60			
ESCUTCHEONS.					HANGERS.			doz. pairs.			Cabinet, trunk and padlock,						
Discount 50 and 10 per cent., new list					Steel barn door.....			8 00	10 00		American.....			per gross			
ESCUTCHEON PINS.					Sterns, 4-inch.....			4 50			Door, japanned and N.P., per			1 50			
Iron, discount 40 per cent.					Zenith.....			5-inch.....	6 00		doz.....			2 50			
FACTORY MILK CANS.					Lare's covered.....						Bronze, Berlin.....			per doz.			
Discount off revised list, 40 per cent.					No. 11, 5-foot run.....			8 40			Bronze, Genuine.....			6 00			
FILES AND RASPS.					No. 11½, 10-foot run.....			10 80			Shutter, porcelain, F. & L.			per doz.			
Great Western.....			70 and 10 per cent.		No. 12, 10-foot run.....			12 60			screw.....			per gross			
Arcade.....			70 " 10 "		No. 14, 15-foot run.....			21 00			White door knobs.....			per doz.			
Kearney & Foot.....			70 " 10 "		Steel, covered.....			4 00	11 00		HAY KNIVES.			2 00			
Disston.....			70 " 10 "		" track, 1 x 3-16 in(100 ft)			3 75			Net prices.						
American.....			70 " 10 "		" 1½ x 3-16 in(100 ft)			4 75			LAMP WICKS.						
J. Barton Smith.....			70 " 10 "		HARVEST TOOLS.						Discount, 60 per cent.						
McClellan.....			70 " 10 "		Discount 60 per cent.						LADDERS, EXTENSION.						
Eagle.....			70 " 10 "		HATCHETS.						Waggoner Extension Ladders, dis. 40 per cent.						
Nicholson, 60 and 10 to 60, 10 and 5					Canadian, discount 40 to 42½ per cent.						Cold Blast.....			per doz.			
Royal.....			80 " "		Shingle, Red Ridge 1, per doz.....			4 40			No. 3, "Wright's".....			7 00			
Globe.....			70 to 75 " "		2,.....			4 85			Ordinary, with O burner.....			8 50			
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.					Barrel, Underhill.....			5 00			Dashboard, cold blast.....			9 00			
Jowitt's, English list, 25 to 27½ per cent.					HAT ENAMEL.						No. 0.....			5 75			
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50					Henderson & Potts' "Anchor Brand"						Japanning, 50c. per doz. extra.						
GLASS.					Blind, Parker's, discount 60 per cent.						LEMEN SQUEEZERS.						
Window.			Box Price.		Heavy T and strap, 4-in., per lb.....			0 06½			Porcelain lined.....			per doz.			
Size United			Per		Screw hook and hinge—			0 05½			Galvanized.....			per doz.			
Inches.			50 ft.	100 ft.		6 to 10 in.....			per 100 lb.	4 50		King, wood.....			2 75		
Under 26.....			3 80	5 06		12 in. up.....				3 25		King, glass.....			4 00		
26 to 40.....			4 00	5 44		Spring, No. 20, per gro. pairs.....				10 50		All glass.....			0 50		
41 to 50.....			4 50	6 56		Spring, Woodyatt pattern, per gro. No. 5,				117.50; No. 10, \$18; No. 20, \$10.80; No.		LAWN MOWERS FOR 1905.					
51 to 60.....			4 75	7 50		120, \$20; No. 51, \$10; No. 80, \$27.50.						Woodyatt, 10½ in., 14-in. cut			\$ 8 50 to \$11 00		
61 to 70.....			5 00	8 62		HOES.						Star.....			9 in.....		
71 to 80.....			5 30	10 75		Garden, Mortar, etc., discount 60 per cent.						Daisy.....			9 in.....		
81 to 90.....			5 30	12 30		Planter.....			per doz.	4 00	4 50	Philadelphia, 7½ in.....			6 00 to 7 50		
86 to 90.....			5 30	15 00		Tinned cast, 35 per cent.						Woodyatt, 10½ in., ball bearing			13 25 to 18 00		
91 to 95.....			5 30	18 00		HOOKS.						Grass Boxes.....			1 75 to 2 00		
96 to 100.....			5 30	21 00		Cast Iron.						King Edw'd, 12-in., 14-in. cut			9 00 to 10 00		
98 to 100.....			5 30	24 00		Bird cage.....			per doz.	0 50	1 10	Horse Lawn Mowers, "Special."					
												Discount, 50 per cent., with freight conces-			sions in quantity shipments.		
												Maxwell & Sons:					
												10½-in. high wheel.....			7 50		
												9-in.....			5 50		
												8-in.....			4 90		
												Discount 50 per cent.					
												LOCKS.					
												Canadian, 50 to 50 and 10 per cent.					
												Russell & Erwin.....			per doz.		

Something You Want!



A STANDING DESK

Strength, Durability, Elegance

—the three essentials of a Standing Desk—combined in our makes. Made in 4-ft., 5-ft., 6-ft., 7-ft., 8-ft. single and double sizes. Constructed in our own factories; you are, therefore, getting them direct from the makers, saving middleman's profit. Send for catalogue. Have you installed our Card System yet? Don't overlook it.

THE OFFICE SPECIALTY MFG. CO., LIMITED

No. 55 YONGE STREET

FACTORIES:

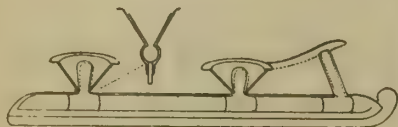
New City Premises: 97-103 WELLINGTON ST. W.,

NEWMARKET.

TORONTO.

PLANE IRONS.		SAP SPOUTS.		STAPLES.		ENAMELLED WARE.	
English	per doz. 2 00 5 00	Bronzed iron with hooks	per 1,000 7 50	Galvanized	3 00	White, Princess, Turquoise, Blue and White	
PLIERS AND NIPPERS.		"Eureka" tinned steel, hooks	8 00	Plain	2 80	discount 50 per cent.	
Button's genuine, per doz. pairs, discount		SAWS.		Coopers', discount 45 per cent.		Diamond, Famous, Premier, discount 50 and	
37½ to 40 per cent.		Hand, Disston's, discount 12½ per cent		Poultry netting staples, discount 40 per cent.		10 per cent.	
Button's imitation	per doz. 5 00 9 00	S. & D., discount 40 per cent.		STOCKS AND DIES.		Granite or Pearl, Imperial, Crescent, discount	
German	" 0 60 0 60	Crosscut, Disston's	per foot 0 35 0 55	American discount 25 per cent.		50, 10 and 10 per cent.	
PRESSED SPIKES.		S. & D., discount 35 per cent. on Nos. 2 and 3.		STONE.		Premier steel ware, 40 per cent.	
Discount 20 per cent.		Hack, complete	each 0 75 2 75	Washita	per lb. 0 28 0 60	"Star" decorated steel and decorated white,	
PULLEYS.		Hack, frame only	each 0 50 1 25	Hindustan	" 0 06 0 07	25 per cent.	
Hothouse	per doz. 0 55 1 00	SASH WEIGHTS.		Labrador slip	" 0 09 0 09	WIRE.	
Axle	" 0 22 0 33	Sectional	per 100 lb. 2 00 2 25	Turkey	" 0 15 0 15	Smooth Steel Wire.	
Screw	" 0 27 1 00	Solid	" 1 50 1 75	Arkansas	" 0 30 0 30	No. 0-9 gauge	\$2 50
Awning	" 0 35 2 50	SASH CORD.		Water-of-Ayr	" 0 10 0 10	10 "	6c. extra.
PUMPS.		Per lb.	0 28 0 30	Scythe	per gross 3 50 5 00	11 "	12c. "
Canadian cistern	1 80 3 60	SAW SETS.		Grind, 2-in., 40 to 200 lb., per ton	25 00	12 "	20c. "
Canadian pitcher spout	1 40 2 10	Lincoln and Whiting	4 75	" under 40 lb., "	28 00	13 "	30c. "
PUNCHES.		Hand Sets. Perfect	4 00	" under 2 in. thick, "	29 00	14 "	40c. "
Saddler's	per doz. 1 00 1 85	X-Cut Sets,	7 50	STOVEPIPES.		15 "	55c. "
Conductor's	" 3 00 15 00	SCALES.		5 and 6 inch, per 100 lengths	7 00	16 "	70c. "
Finners, solid	per set 0 72	Gurney Standard, 40 per cent.		7 inch	7 50	Add 60c. for coppering and \$2 for tinning.	
" hollow	per inch 1 00	Gurney Champion, 50 per cent.		ENAMELLED STOVE POLISH.		Extra net per 100 lb. — Oiled wire 10c.,	
RAKES.		Burrow, Stewart & Milne—		No. 4, 3 doz. in case, net cash	4 80	spring wire \$1.25, special hay baling wire 30c.,	
Wood	per doz. net 1 20 up	Imperial Standard, discount 40 per cent.		No. 6, 3 doz. in case	8 40	best steel wire 75c., bright soft drawn 15c.,	
RAZORS.		Weight Beams, discount 35 per cent.		TACKS, BRADS, ETC.		charcoal (extra quality) \$1.25, packed in casks	
Elliot's	per doz. 4 00 18 00	Champion Scales, discount 50 per cent.		Carpet tacks, blued	80 and 15	or cases 15c., bagging and papering 10c., 50	
Geo. Butler's & Co.'s	" 4 00 18 00	Fairbanks standard, discount 35 per cent.		" " " tinned	80 and 20	and 100-lb. bundles 10c., in 25-lb. bundles	
Boker's	" 7 50 11 00	" Dominion, discount 55 per cent.		" " " (in kegs)	40	15c., in 5 and 10-lb. bundles 25c., in 1-lb.	
" King Cutter	12 50 15 00	" Richelieu, discount 55 per cent.		Cut tacks, blued, in dozens only	40	hanks, 50c., in 1-lb. hanks 75c., in 1-lb.	
Wade & Butcher's	" 3 60 10 00	Warren's new Standard, discount 40 per cent.		" ½ weights	60	hanks \$1.	
Theile & Quack's	" 7 00 12 00	" " Champion, discount 50 per cent.		Swedes cut tacks, blued and tinned—		Fine Steel Wire, discount 25 per cent.	
Carbo Magnetic	" 12 00 15 00	" " Weighbeams, discount 35 per cent.		In bulk	80 and 10	List of extras: In 100-lb. lots: No. 17,	
Griffon Barber's Favorite	" 12 00 15 00	SCREW DRIVERS.		In dozens	75	\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—	
Griffon Safety Razors	" 13 50	Sargent's	per doz. 0 65 1 00	Swedes, upholsterers', bulk	85, 12½ and 12½	No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.	
Griffon Strapping Machines	" 13 50	SCREEN DOORS.		" brush, blued and tinned	70	24, \$8—No. 25, \$9—No. 26, \$9.50—No. 27,	
Lewis Bros. " Klean Cutter	8 50 10 50	Common doors, 2 or 3 panel, walnut		bulk	70	\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—	
Clauss, 50 and 10 per cent.		stained, 4-in. style	per doz. 6 50	Swedes, gimps, blued, tinned and	75 and 12½	No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,	
Clauss Straps, 50 and 10 per cent.		Common doors, 2 or 3 panel, yellow and		Japanned	40	\$17. Extras net—tinned wire, Nos. 17-25,	
REGISTERS.		green stained, 4-in. style	6 75	Zinc tacks	35	\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,	
Discount 40 per cent.		Common doors, oil finish	per doz. 8 75	Leather carpet tacks	55	\$2—oil, 10c.—in 25-lb. bundles, 15c.—in 5	
RIVETS AND BURS.		3-in. style 20c. per dozen less.		Copper tacks	50	and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.	
Iron Rivets, black and tinned, 60 and 10 p. s.		SCREWS.		Copper nails	52½	—in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—	
Iron Burrs, discount 55 per cent.		Wood, F. H., bright and steel, discount 87½		Trunk nails, black	65 and 10	packed in casks or cases, 15c.—bagging or	
Extras on Iron Rivets in 1-lb. cartons, 1c.		Wood, R. H., bright, dis. 82½ per cent.		Trunk nails, tinned	65 and 10	papering, 10c.	
per lb.		" F. H., brass, dis. 80 per cent.		Clout nails, blued	65 and 5	Brass wire, discount 60 per cent. off the list.	
Extras on Iron Rivets in ½-lb. cartons, 1c.		" R. H., dis. 75 per cent.		Chair nails	35	Copper wire, discount 60 per cent. net cash	
per lb.		" F. H., bronze, dis. 75 per cent.		Patent brads	40	30 days, f.o.b. factory.	
Copper Rivets, with usual proportion burrs, 45		" R. H., dis. 70 per cent.		Fine finishing	40	Galvanized wire, per 100 lb.—Nos. 4 and 5,	
per cent. Cartons, 1c. per lb. extra, net.		Drive Screws, dis. 87½ per doz.	3 25 4 00	Lining tacks, in papers	10	\$3.70 to \$3.75—Nos. 6, 7, 8, \$3.15 to \$3.18	
Copper Burrs only, discount 30 and 10 per cent.		" iron	4 25 5 00	" " in bulk	15	No. 9, \$2.55—No. 10, \$3.20 to \$3.20	
Extras on Tinned or Coppered Rivets, ½-lb.		Set, case hardened, dis. 60 per cent.		Saddle nails, in papers	10	No. 11, \$3.25 to \$3.25—No. 12, \$2.65	
cartons, 1c. per lb.		Square Cap, dis. 50 and 5 per cent.		" in bulk	15	No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.	
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ROPE, ETC.		Per doz. net	6 00 9 00	English, Patent Leather	5 50 9 75	12½c. less.	
Sisal	0 11½	Canadian, discount 40 per cent.		Chesterman's	0 90 2 85	WIRE FENCING.	
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"British" Manila	0 12	Clauss, nickel, discount 80 per cent.		TINNERS' SNIPS.		Galvanized, plain twist	2 75
Cotton, 3-16 inch and larger	0 20 0 22	Clauss, Japan, discount 67½ per cent.		Per doz.	3 00 15 00	Galvanized barb, f.o.b. Cleveland, \$2 55½ in	
" 5-32 inch	0 25 0 27	Clauss, tailors, discount 40 per cent.		Clauss, discount 35 per cent.		less than carlots, and \$2 45 in carlots.	
" ½ inch	0 25 0 28	Seymour's, discount 50 and 10 per cent.		Tin case and dairy, 75 to 75 and 10 per cent.		COILED SPRING WIRE.	
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Jute	0 09	Canadian, discount 45 per cent.		Game, Newhouse, discount 25 per cent.		" No. 11	3 35
Lath Yarn, single	0 10	SINKS.		Game, H. & N., P. S. & W., 65 per cent.		" No. 12	2 95
" double	0 10½	Cast iron, 16 x 24	0 85	Game, steel, 72½, 75 per cent.		WIRE CLOTH.	
Sisal bed cord, 48 feet	per doz. 0 65	" 18 x 30	1 00	TROWELS.		Painted Screen, per 100 sq. ft., net ..	1 50
" 60 feet	0 80	" 18 x 36	1 40	Disston's, discount 10 per cent.		Terms, 2 per cent. off 30 days.	
" 72 feet	0 95	SNAPS.		German	4 75 6 00	WASHING MACHINES.	
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Carpet (Rutten's), 5 to 16 per cent. advance		Plain, discount 75 and 12½ per cent. off re-		Saw Vise	4 50 9 00	Lightning	27 00
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Superior Mfg. Co., Toronto.

Steel Castings.

Montreal Steel Works, Montreal.

Steel Rails.

Algoma Steel Co.—Drummond, McCall & Co., Agents, Montreal.
Jackson, C. F., & Co., Vancouver, B.C.
Morton, B. K., & Co., Sheffield, Eng.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.

Stock Food.

Colonial Stock Food Co., Toronto.
International Stock Food Co., Toronto.

Store Lighting.

Auer Light Co., Montreal.
Grose, Walter, Montreal.
International Gas Appliance Co., Toronto.
St. Thomas Acetylene Mfg. Co., St. Thomas, Ont.

Stoves and Tinware, Radiators, Furnaces, etc.

Adams Co., Dubuque, Iowa.
Batty Stove & Hardware Co., Toronto.
Canadian Heating & Ventilating Co., Owen Sound.
Davidson, Thos., Mfg. Co., Montreal.
Fairgrieve Mfg. Co., Toronto.
Guelph Foundry Co., Guelph.
Gurney Foundry Co., Toronto.
Kemp Mfg. Co., Toronto.
Ives, H. R., Co., Montreal.
McClary Mfg. Co., London.
Merrick, Anderson & Co., Winnipeg.
Sterne, G. F., & Son, Brantford, Ont.
Stewart James Mfg. Co., Woodstock.
Telephone City Stoves, Brantford.
Western Foundry Co., Wingham.
Wright, E. T., & Co., Hamilton.

Toasters.

Fairgrieve Mfg. Co., Toronto.

Vises.

Lamplough, F. W., & Co., Montreal.

Wall Paper.

Staunton's Limited, Toronto.

Warehouse Trucks.

Fairbanks Co., Montreal.
Slingsby, H. C., Montreal.

Washing Machines, etc.

Connor, J. H., & Son, Ottawa.
Taylor-Forbes Co., Guelph, Ont.

Wholesale Hardware.

Birkett, Thos., & Sons Co., Ottawa.
Bowman, John, Hardware & Coal Co., London, Ont.
Canada Hardware Co., Montreal.
Howland, H. S., Sons & Co., Toronto.
Kennedy Hardware Co., Toronto.
Lewis Bros. & Co., Montreal.
Lewis, Rice, & Son, Toronto.
Merrick, Anderson & Co., Winnipeg.

Wire, Wire Rope, Cow Ties, Fencing Tools, etc.

Canadian Steel Wire Fence Co., Hamilton.
American Steel and Wire Co., New York, Montreal, Chicago.
Dennis Wire and Iron Co., London, Ont.
Dominion Wire Mfg. Co., Montreal and Toronto.
Greening, B., Wire Co., Hamilton.
Ironside, Son & Co., London, Eng.
McGregor - Banwell Fence Co., Windsor, Ont.
Merrick, Anderson & Co., Winnipeg.
Oneida Community, Niagara Falls.
Ontario Wire Fencing Co., Picton, Ont.
Owen Sound Wire Fence Co., Owen Sound.
Page Wire Fence Co., Walkerville, Ont.
Walter, E. F., & Co., Montreal.
Western Wire & Nail Works, London, Ont.

Woodenware.

Taylor-Forbes Co., Guelph, Ont.
United Factories, Toronto.

Wrapping Papers.

Canada Paper Co., Toronto.
McArthur, Alex., & Co., Montreal.

Want Ads.

In this paper cost 2 cents per word first insertion, 1 cent per word subsequent insertions. Contractions count as one word, but five figures (such as \$1,000) may pass as one word. Cash remittance to cover cost **must in all cases** accompany orders, otherwise we cannot insert the advertisement. When replies come in our care 5 cents additional must be included for forwarding same. Many large business deals have been brought about through advertisements of 20 or 30 words. Clerks can be secured, articles sold and exchanged, at small expenditure.

MACLEAN PUBLISHING CO., Limited
Montreal and Toronto.

CONNOR'S O. K. ROTARY WASHER.



No experiment, but a trade winner. Dealers who handle his washer say they sell easier than any other. Write for catalogue and price list.

J. H. CONNOR & SON, LTD., Manufacturers OTTAWA

BUY THIS BOOK

SUCCESSFUL ADVERTISING—
How To Accomplish It.—By J.
Angus MacDonald.

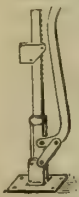
Every Merchant and Salesman

will find it full of invaluable matter relating to the selling of goods. Chuck full of suggestions and instruction. Enthusiastically endorsed by press and advertising authorities.

Sent postpaid for \$2.00.

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LIMITED

TECHNICAL BOOK DEPT. - TORONTO.



COVERT MFG. CO.

West Troy, N.Y.

Steel Carriage and Wagon Jacks

Harness Snaps, Chain, Rope and Web Goods, etc.

SOLD BY ALL LEADING JOBBERS.

Buy the Best.



HERCULES

Sash Cord.

Star Brand Cotton Rope
Star Brand Cotton Clothes Lines
Star Brand Cotton Twine

For Sale by all Wholesale Dealers.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

IRONSIDE FOR IRON

OUR SPECIALTIES ARE IRON, STEEL, METALS, BARS, PLATES, SHEETS, BOLTS and NUTS, TIN PLATES, Etc.

Sole Licencees for **PAGE'S PATENT WIRE STRETCHER**, and we are willing to sell the right of manufacture in Canada on a Royalty basis.

IRONSIDE'S PATENT WIRE CUTTERS, guaranteed to cut any wire

We publish a "Canadian Metal Price List" monthly. Quotations in Dollars and Cents. (C.I.F.) We will send this, and our "Weekly Market Report" on receipt of address.

IRONSIDE, SON & CO., 16 Water Lane Gt. Tower St., E.C. **LONDON, ENG.**

...ESTABLISHED 1849...

BRADSTREET'S

Capital and Surplus, \$1,500,000.

Offices Throughout the Civilized World.

Executive Offices: Nos. 346 and 348 Broadway, New York City, U.S.A.

THE BRADSTREET COMPANY gathers information that reflects the financial condition and the controlling circumstances of every seeker of mercantile credit. Its business may be defined as of the merchants, by the merchants, for the merchants. In procuring, verifying and promulgating information no effort is spared, and no reasonable expense considered too great, that the results may justify its claim as an authority on all matters affecting commercial affairs and mercantile credit. Its offices and connections have been steadily extended, and it furnishes information concerning mercantile persons throughout the civilized world.

Subscriptions are based on the service furnished, and are available only by reputable wholesale, jobbing and manufacturing concerns, and by responsible and worthy financial, fiduciary and business corporations. Specific terms may be obtained by addressing the Company at any of its offices. Correspondence invited.

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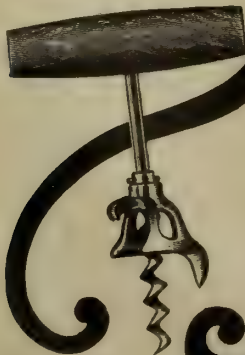
HALIFAX, N.B.
OTTAWA, ONT.
VANCOUVER, B.C.

HAMILTON, ONT.
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TORONTO, ONT.

THOS. C. IRVING, Gen. Man. Western Canada. Toronto.



WHY Sell Old Style Cork Screws?

The People Want

WALKER'S SELF-PULLING

which draws the cork, cuts the wire, removes crown, seal and aluminum stopper. Does the whole thing. Each one tested and guaranteed. We manufacture over 50 different styles.

ERIE SPECIALTY COMPANY, Erie, Pa., U.S.A.



IRON

Bars in Flats, Rounds, Squares,
Ovals, Half-Ovals, Half-Rounds and
Bands. Also Wrought Washers.
GOOD QUALITY. PROMPT SHIPMENT.

London Rolling Mill Co.
Limited,
LONDON, CANADA.

STEEL



LUFKIN

MEASURING TAPES

Steel, Metallic, Linen, Pocket, Ass Skin,
Pat. Leather, Bend Leather, Etc.

ARE THE BEST AND MOST POPULAR TAPES IN THE WORLD.
YOUR STOCK IS NOT COMPLETE WITHOUT THEM.

LUFKIN RULE CO., Saginaw, Mich, U.S.A.

London Office and Warehouse—48 Lime St. New York City Branch—280 Broadway.

For sale by ALL PROMINENT CANADIAN HARDWARE JOBBERS.

WE INSIST UPON IT

because we know that the hardware
dealers of Canada are among the
most successful handlers of stock
food.

We also insist, for the same reason,
that

INTERNATIONAL STOCK FOOD

is the very best, the most readily
sold, and the most profitable of any
stock food on the market. We co-
operate with the local agent to sell
this food beyond his expectations.
He helps us, we help him. Send for
our proposal.

INTERNATIONAL STOCK FOOD CO.
TORONTO.

NEW PATENT STABLE FIXTURES



Galvanized Steel Watering Bowl and Steel U Bar Stanchions.

A profitable line for the trade.
These fixtures are easily in-
stalled, are very durable, will
not get out of order, and as
they save one-third of the
feed and are a great conve-
nience, every progressive
farmer will want them. The
demand has already been
created and the trade will
find it in their interests to
carry samples and equip
themselves to install systems.

The Metal Shingle and Siding Co.

PRESTON, ONT. LIMITED

Western Agency:
ELLIS & GROGAN,
CALGARY.

Manitoba Agency:
CLARE & BROCKEST,
WINNIPEG.

Montreal Agency:
J. B. DAGENAIS
953 ST. JAMES ST.

Est. 1868.

Inc. 1896.

Black Diamond File Works**G. & H. Barnett Company**

PHILADELPHIA

Twelve

TRADE MARK

Medals



Awarded

By **JURORS** at**International Expositions
Special Prize**

Gold Medal at Atlanta, 1895



The Fisk Detachable Motor Tire.

The most efficient, satisfactory and durable Motor Tire yet manufactured. The Fisk Tire is mechanically attached and has none of the weaknesses of the automobile tire which is held to the rim by air pressure. There is absolutely no creep or roll to the Fisk Motor Tire and it cannot come off the wheel.

Manufactured in Canada solely by

THE GUTTA PERCHA & RUBBER MFG. CO.
OF TORONTO, LIMITED.

Temporary Offices:

15 East Wellington Street, Toronto.

Branches—MONTREAL, WINNIPEG.

B. & S. H. THOMPSON & Co.

LIMITED

53 St. Sulpice Street, MONTREAL

DOMINION OF CANADA SALES AGENTS FOR THE

American Sheet & Tinsplate Company Departments
OF THEUnited States Steel Products Export Company
NEW YORK.

GALVANIZED SHEETS.

BLACK SHEETS, Plain and Polished,
in all qualities.

TINPLATES, Coke and Charcoal.

LARGE TINNED SHEETS.

CANADA PLATES, Black and Gal-
vanized.

BLACK PLATES, &c.

SADLER & HAWORTH*"Extra"**"Standard"*

HIGH - CLASS
SPECIALISTS
—in—
Leather Belting
Talk it over with us when
needing Belting.

"Diamond" *"Agricultural"*

WAREHOUSES & FACTORIES
AT
MONTREAL and TORONTO.

HARDWARE AND METAL

AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery, Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, OCTOBER 22, 1904.

NO. 43

ANVILS
HENRY BOKER BITS
MANUFACTURER
OF
ARROW BRAND
REGISTERED TRADE MARK
HARDWARE
Pliers Vices
SPECIALITIES OF ALL DESCRIPTIONS
FOR SALE BY LEADING WHOLESALE HOUSES.

"FLEUR DE LIS" GALVANIZED IRON.



First quality, low price, every sheet guaranteed.

JOHN LYSAGHT, Limited, Makers, A. C. LESLIE & CO., MONTREAL
BRISTOL, ENG. Managers Canadian Branch.

Lawn Mowers for 1905

STRONG POINTS OF TAYLOR-FORBES MACHINES ARE:

Only One Grade of Steel for Cylinders, and that the best and most expensive.

All Castings are Machine-made, and therefore of one size and uniform.

All Labor used is Thoroughly Skilled. We do not use any cheap help.

Orders should be booked NOW for 1905

SOLD ONLY THROUGH THE JOBBING TRADE

Taylor-Forbes Company,

Montreal Branch :
9 De Bresoles St.

The Largest Manufacturers of Hardware in Canada.

LIMITED.

GUELPH, CANADA.

DEALERS—

Have you been asked for the GEM FOOD CHOPPER? A modern household utensil that is needed in every kitchen. Carefully made, nicely tinned, self cleaning, self sharpening. It has four steel cutters, and is made in three sizes.

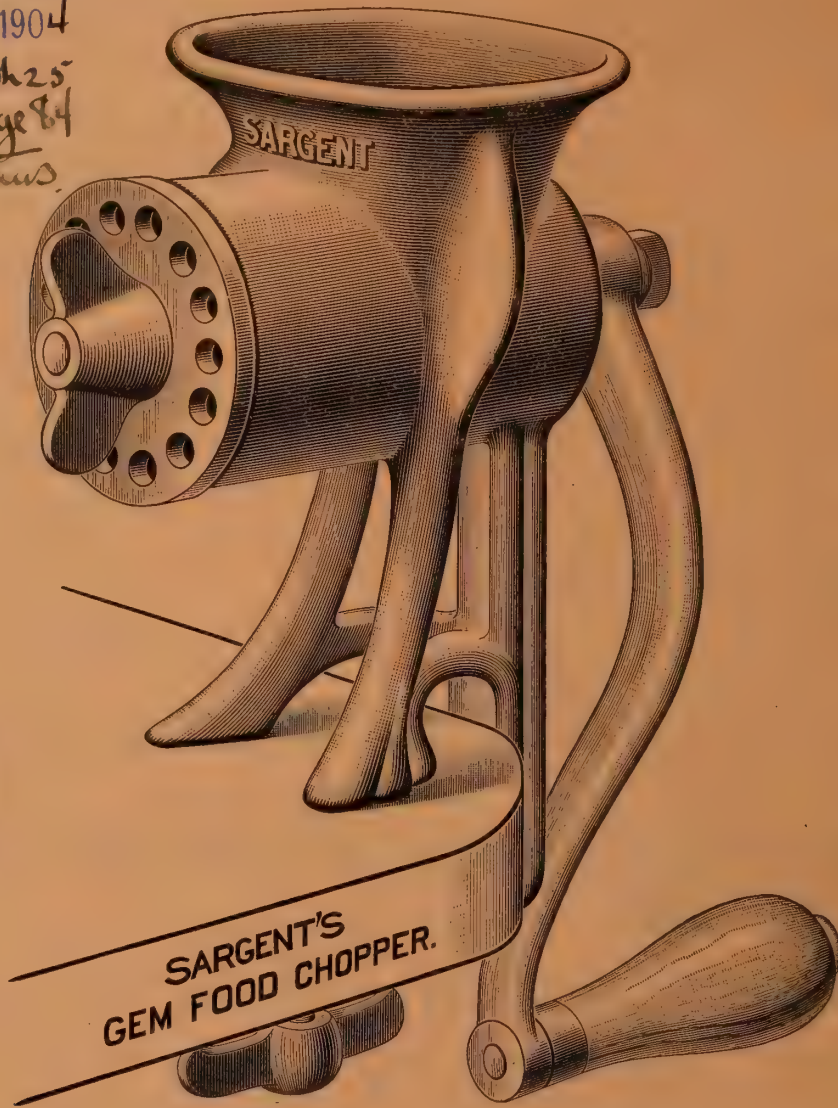
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OCT 22 1904

Cut Book 25
Page 84
CWS.

To Owner.

Gem
Food
Chopper



SIZES OF
Gem Food
Chopper

No. 20, Family size; cuts 2 lbs. per minute.

No. 22 stands higher from table and has larger hopper; cuts 2½ lbs. per minute.

No. 24 is extra large and heavy; cuts 3 lbs. per minute.



WRITE FOR PRICES

RICE LEWIS & SON
LIMITED
TORONTO.

**ALWAYS
READY
FOR USE**



Full Hollow
Ground \$2.50 Each
Double Concave for
extra hard beards, \$3.00

Send for free book, "HINTS TO SHAVERS."

The **CARBO MAGNETIC** RAZOR

No Honing! No Grinding!

No Smarting after Shaving. With ordinary careful use will

KEEP AN EDGE FOR YEARS WITHOUT HONING.

Booklet coming—if you will ask for a copy, with trade discount.

FOR SALE BY LEADING JOBBERS.

FIRM OF

A. L. SILBERSTEIN, *Griffon* Cutlery
MAKERS OF

459-461 BROADWAY, NEW YORK.

The Canadian Rubber Co. of Montreal.

MANUFACTURERS OF

**Rubber Belting,
Hose, Packing,
Valves, Gaskets,
ETC., ETC.**

We make a specialty of

HORSE SHOE PADS

the best in the market.

Write for Prices and Circulars.

Head Office : : MONTREAL

BRANCHES—TORONTO, WINNIPEG and VANCOUVER

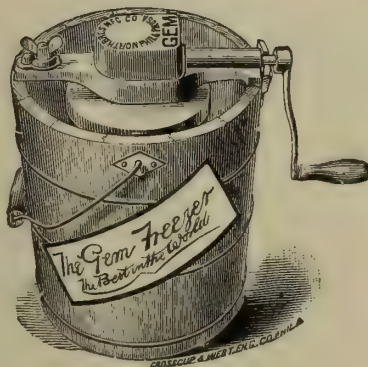
**Lightning, Gem
Blizzard . . .**

FREEZERS



ARE

Well Advertised.
In Demand.
Easily Sold.
Satisfactory in Use.
Of Known Reputation.



HAVE

Cedar Pails with Electric Welded Wire Hoops.
Cans of Heavy Tin with Drawn Steel Bottoms.
AUTOMATIC Twin Scrapers.
"The Ice Cream Freezer Book" tells all about
these and our other Freezers, mailed free.



EXCEL IN

Easy Running.
Quick Freezing.
Economy.
Convenience.
Practical Results.

**North Bros. Mfg. Co., Philadelphia, Pa.,
U. S. A.**

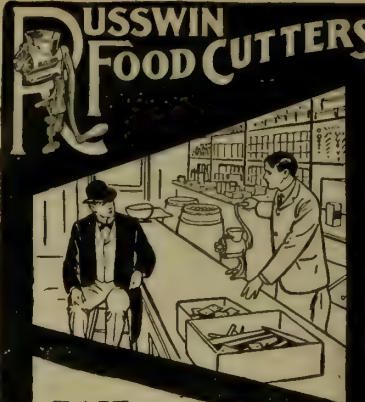
THOS. BIRKETT & SON CO.,
LIMITED
 Wholesale Hardware Merchants
OTTAWA, ONT.

Seasonable Goods such
 as....

Axes, Cross-Cut Saws,
Horse Blankets, Sleigh
Bells, Game Traps, Cut-
lery in Cases, etc.

GET OUR PRICES BEFORE ORDERING.

P.S.—Bread Makers in 2 sizes for 4 and 8 Loaves.



RUSSWIN
FOOD CUTTERS

**EASE
 OF OPERATION**

is one of the many advantages
 of the Russwin Food Cutter.
 It CUTS—does not tear, grind or
 mash. Knives are self-sharpen-
 ing—easily adapted to cut
 coarse, cut fine, or pulverize.
 Try it. For sale everywhere.
 Made by

RUSSELL & ERWIN MFG. CO.
 NEW BRITAIN, CONN.

—FOR SALE BY—

The KENNEDY HARDWARE CO., Limited

49 Colborne St., TORONTO, ONT.

“Gordon Crown” Galvanized Sheets

None Better.
 Lots Worse.

Prices cheerfully quoted
for stock shipment
or import.

M. & L. Samuel, Benjamin & Co.

503 Temple Building - TORONTO.

English House—16 Philpot Lane, LONDON, ENGLAND.

Trap Truths

Business always comes to the man with the greatest variety.
In buying,—cash discounts lower the price.
Our price on traps is right down on the ground.
Our Mail Order Service will assist you in keeping your
assortment complete.

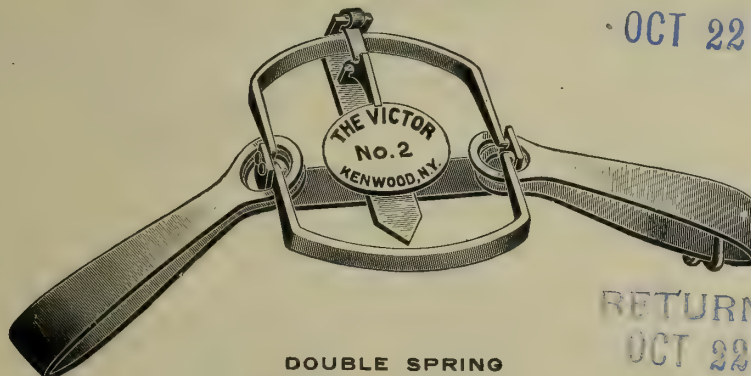
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H. & N.
Victor
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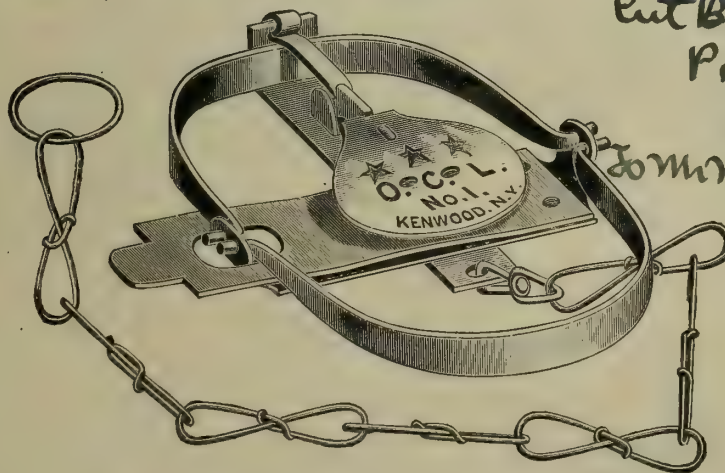
WITH
CHAIN



SINGLE SPRING



DOUBLE SPRING



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OCT 22 1904

RETURNED
OCT 22 1904

RETURNED
OCT 22 1904

Put Book 25
Page 82

See Mr. Munro
No. 0 — Gopher
" 1 — Muskrat
" 1½ — Mink
" 2 — Fox
" 2½ } Otter
" 3 }
" 4 — Beaver
" 4½ — Wolf
" 5 — Bear

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WITHOUT
CHAIN

Lewis Bros. & Co.

Importers and Distributors

Address All Correspondence to

M o n t r e a l

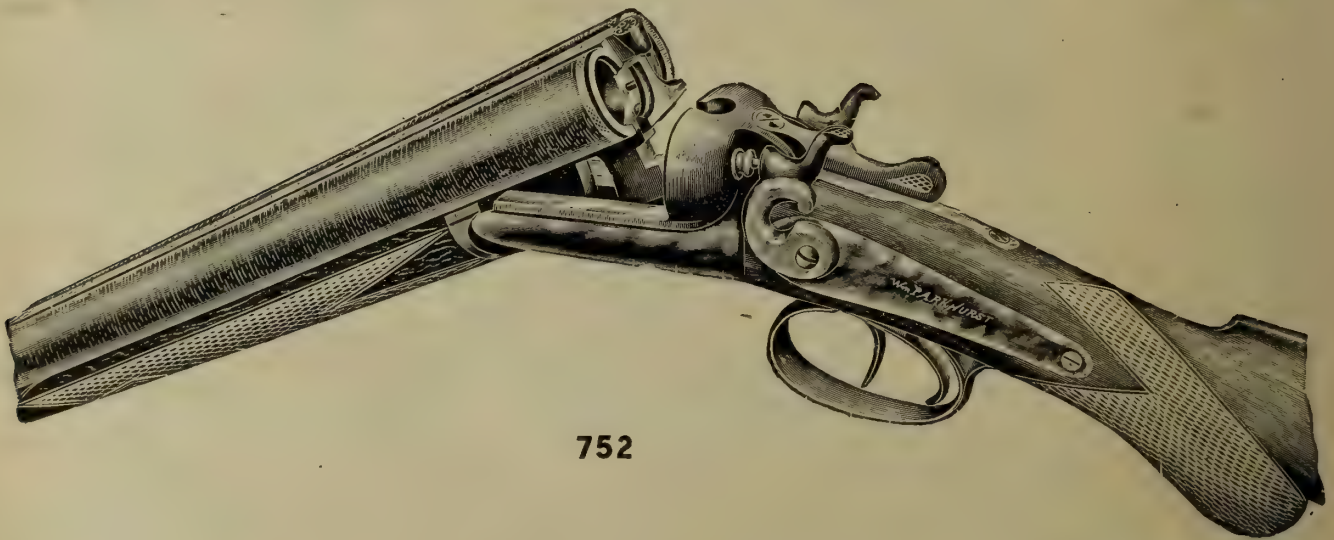
Toronto Vancouver Ottawa

Hunting For Snaps?

Stop! Don't hunt any more. The snaps are right here. High quality Guns at prices that are sure to hit the mark. You would be surprised if you knew what we were selling them for. A post card will bring convincing prices.



756

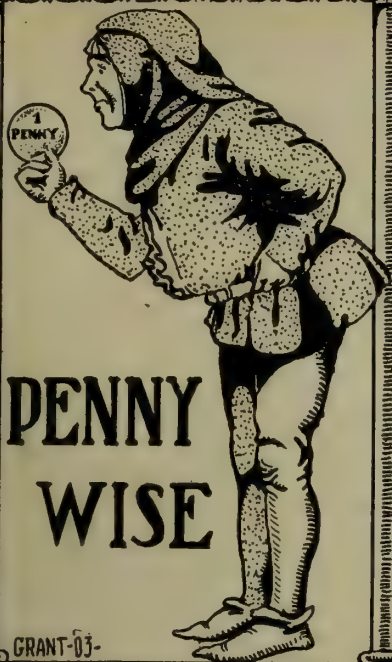


752

SPECIAL— A line of Hammerless Guns that we are clearing out at reduced prices.

John Bowman Hardware and Coal Company

LONDON, ————— CANADA.



The only real value of money lies in making use of it.

The money that lies there in your safe from day to day doesn't do you any good until you commence to use it.

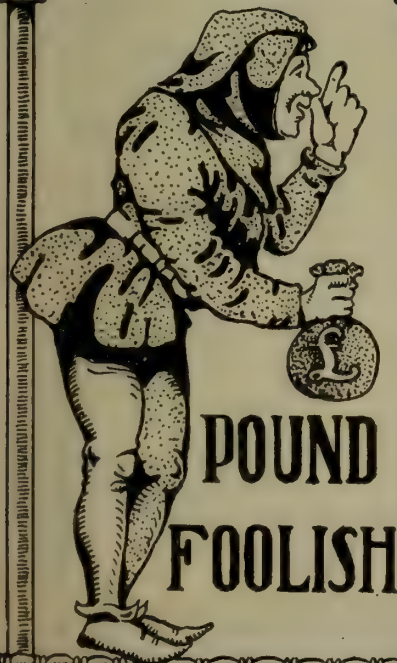
Then its value to you depends on how you use it.

Now, if you would only invest some of it in advertising space in **HARDWARE AND METAL**, and then use the space right you'd have a valuable assistant, working to increase your trade with hardwaremen and to make yourself and your goods better known among them.

Some folks would sooner save (?) the money—but they are "penny wise and pound foolish."

But you're not.

Are you?



MAGLEAN PUBLISHING CO.—DEPT. OF ADVERTISING SERVICE

Our Works are not in Manchuria; they are in England, on the banks of the Manchester Ship Canal. We can often give better deliveries than works 100 miles from you; the reason—we carry **STOCK** of Cap and Set Screws, Finished and Semi-finished Nuts, and don't usually have to stop to make 'em; prices, too, are right.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

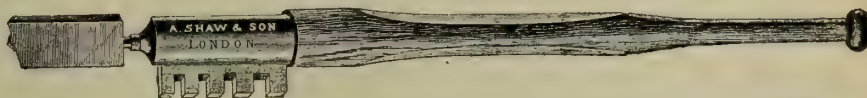
Established 1815

ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.



Agents for Canada: **A. Ramsay & Son Company, Montreal**

GLAZIERS' DIAMONDS



Ahead of all others in quality and workmanship. If sparks of fine quality, set by experts, are what you require, buy Diamonds of **A. Shaw & Son's** make.

Canadian Agent

GODFREY S. PELTON

388 ST. PAUL ST., MONTREAL

Clauss Brand

FULLY
WARRANTED.



TINNER SNIPS

Steel Faced on Solid Steel.

Japan Handles, Highly Finished Blades.

Write for trade discounts.

CLAUSS SHEAR CO., 169 Spadina Ave., Toronto, Ont.

CELEBRATED

HEINISCH SHEARS

Tailors' Shears,
Trimmers' Shears,
Tinners' Snips, etc.



ACKNOWLEDGED THE BEST.

R. HEINISCH'S SONS CO.

NEW YORK OFFICE, 155 Chambers St.
NEWARK, N.J., U.S.A.



SEYMOUR SHEARS

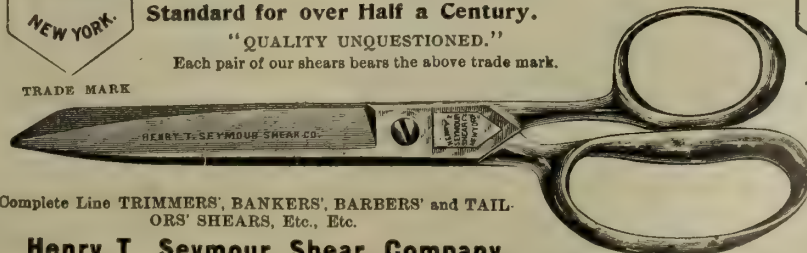
HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



TRADE MARK

Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.

Latest Catalogue will be sent in exchange for your business card.



Horsemen

and Stockmen generally are using every Winter immense quantities of Stock Food.

We want hardware dealers to sell

Colonial Stock Food

—Prepared to produce results—good blood, good flesh, good health.

—Sold at prices that yield wonderfully good profits.

—We send to an agent's customers at our expense all the literature required to sell our Food.

Only one agent in each section.

Write to-day for your section.

COLONIAL STOCK FOOD CO.

79-81 WILLIAM STREET, TORONTO

WE KNOW HORSES

and cattle like a book. We own DAN PATCH, the champion harness horse of the world,—and some others.

By the way, we shall be glad to send, free, a large colored lithograph of Dan Patch to any reader of Hardware and Metal. Post card will do.

We make

INTERNATIONAL STOCK FOOD

—the best Stock Food in the world. It will sell quicker than any other Stock Food made. We help our agents sell our Food as no other makers do to get theirs sold. This is why we should have you for our agent.

SEND US AN INQUIRY FOR
OUR PROPOSAL TO YOU.

INTERNATIONAL STOCK FOOD CO.
TORONTO.



Steel Frame Churn.

DAVID MAXWELL & SONS

ST. MARYS, ONT., CANADA.

"Maxwell Favorite Churn."

PATENTED FEATURES: Improved Steel Stand Roller Bearings, and Foot and Hand Lever Drive, and Detachable Driving Link. Improved for season of 1904. Steel or Wood Frame as desired.

Wheelbarrows. In Four Different Sizes.

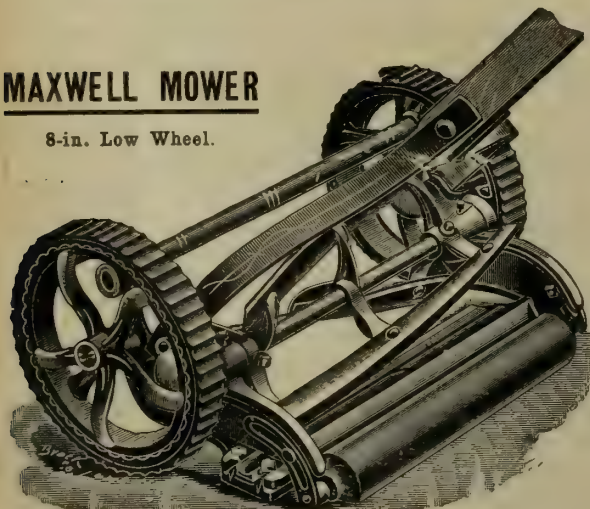
Lawn Mowers. High and Low Wheels, from 12 in. to 20 in. widths. Cold Rolled Steel Shafting, Crucible Steel Knives and Cutting Plate.

If your Wholesale House does not offer you these articles

SEND DIRECT TO US.

MAXWELL MOWER

8-in. Low Wheel.



"THE MAXWELL"

Lawn Mower

High Wheel 10 inches.





ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the

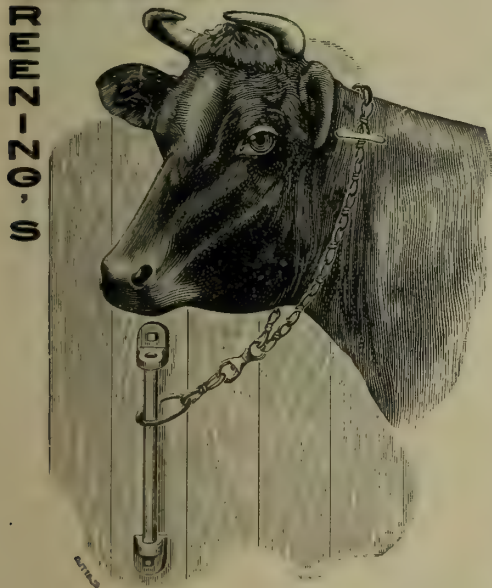
NIAGARA WIRE LINK
OPEN RING TYPE.

Also made in CLOSED RING, THREE CHAIN
and DOMINION (or "Short") TYPES.

Oneida Community Cow Ties can be had of all
the leading jobbers. We invite correspondence
where any difficulty is experienced in obtaining
our goods.

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

GREENING'S



PATENT COW TIES.

These Cow Ties
have stood the
test for years.
Undoubtedly the
best and strong-
est on the mar-
ket.

It will pay to handle only the best.

A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

THE B. GREENING WIRE CO.,
LIMITED
Hamilton, Ont. Montreal, Que

NO DISHONESTY

in Gurney Scales. Every bit of
metal, every bit of wood that
enters into the construction of a

Gurney Scale

is tried and true Our scales are
standard for design, for work-
manship, for durability and for
steady accuracy.

Never buy scales without first
investigating Gurney's.

SEND FOR CATALOGUE.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse :

Western Warehouse :

The Gurney-Massey Co., Limited The Gurney Stove and Range Co.
Montreal, Que. Winnipeg, Man. Limited,

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.**

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.
LIMITED
MONTREAL and TORONTO



**"Pullman"
Lawn Sprinkler**

**IS YOUR
ORDER IN ?**

Send for Folder No. 14.

PULLMAN MFG. CO
Rochester, N. Y., U. S. A.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and
ELECTRO PLATE.**

Ask for our Catalogue and Quotations.

The Best Door Closer Is . . .

NEWMAN'S INVINCIBLE FLOOR SPRING

Will close a door silently against any pressure of wind. Has many working advantages over the ordinary spring, and has twice the wear. In use throughout Great Britain and the Colonies. Gives perfect satisfaction. Made only by

W. NEWMAN & SONS,

Hospital St., - - - BIRMINGHAM

IN THIS COUNTRY

There are workers in Iron, Tube Makers, Carriage Makers, Tinware people, who should mark their goods with a **STEEL STAMP**. We make these stamps. Quote you ?

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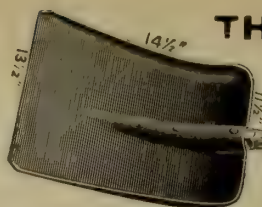
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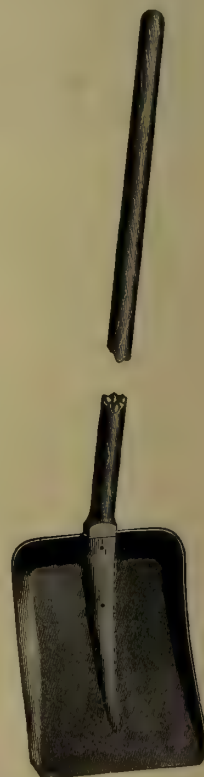
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ALUMINO-THERMICS

An address by Dr. Hans
Goldschmidt at McGill
University.*

A NEW means of creating high temperatures is apt to lay the foundation for more or less important industrial developments. Legends tell us that there was once a time when humanity existed without fire until Prometheus brought the divine fire to the dwellers of the earth and thereby laid the foundation for civilization. In making a step forward across thousands of years, look at the industries before the employment of black coal—before it became known that coal was combustible matter. We perceive that our whole modern technical knowledge is based on the creation of heat by the combustion of black coal. A new fire was supplied by Volta in the electric arc, but it took centuries before the invention of dynamos enabled us to utilize the heat power supplied by electricity, by means of the electric lamps and furnace. We perceive that the fundamental idea and the mere production of heat do not by themselves supply practical results, and that it is only the application that determines the real value, which it sometimes takes many years to detect. To these known means for the production of high temperatures, a new one is now added—the so-called “thermit process.”

Although I may assume that most of you know the principles of the process, you will nevertheless permit a short explanation of its essential points. Just as generations passed over mineral coal without detecting its combustible properties, it was not known heretofore that aluminum belonged to the combustible products, which under certain circumstances, once ignited, continues its own combustion. Aluminum in a divided state only wants to be mixed in certain proportions with a chemical compound containing oxygen, so-called “oxide,” for instance—oxide of iron—in order to obtain a heating compound now known as Thermit, which name is copyrighted.

It is self-evident that the technical details of its preparations required special study, just as much as the preparation of gunpowder or dynamite. The particular character of this burning Thermit is quite different from that of explosives, the effect of which is always based on

instantaneous production of great masses of gas. No gas whatever is produced by Thermit. The mass continues the combustion within itself without a supply of air or heat from outside. The chemical reaction is of the simplest, so that the first chemical lesson might commence with an explanation of these simple phenomena. Even to a layman they are quite intelligible, as only three elements intercommunicate. First, aluminum, which is mixed, secondly, with a combination of metal—for instance, iron—and thirdly, oxygen, which combination is called “oxide of iron.” If this Thermit compound is ignited, nothing except a separation of the oxygen from the iron and a chemical combination with the aluminum results, forming, therefore, aluminum oxide, and setting free or melting out the iron.

When Thermit has been burnt down in a crucible, the aluminum oxide, also called “corundum,” floats on the top as a slag; the iron lies at the bottom as a regulus.

I have not yet mentioned the most remarkable and important properties of Thermit: firstly, its high combustion temperature, about equal to that of the electric arc—say 3,000 degrees centigrade—and secondly, the speed of the reaction. A density of energy of the heat supply is produced, which has up to the present time never been obtained by other means—not even by the largest electric furnaces hitherto constructed. In this lies the principal reason of the utilization of Thermit. Independently from the quantity brought to reaction, the duration of the combustion in the crucible remains about unchanged, say from one-half to one minute. This is explained by the speed of the reaction peculiar to Thermit. In a large crucible a large melting zone is formed, which again on the larger surface speedily ignites the surrounding particles. Thermit must be ignited by a so-called “ignition powder” of low ignition point, but producing a high temperature, which in its turn ignites the Thermit, as the latter is very difficult to ignite and in consequence presents no fire risk. Thermit thrown into an open hearth fire won't burn, because the temperature of this fire is insufficient to ignite Thermit.

Two parts of weight of Thermit give one part of pure, mild, malleable iron.

If 200 kilos Thermit are ignited in one crucible, hardly a minute afterwards one has at his disposal 100 kilos of liquid, superheated, mild steel. By no other known means has it hitherto been possible to produce liquid steel in so speedy and simple a manner. No apparatus is required. A crucible lined with highly refractory basic material, such as magnesia or corundum slag obtained by this process, is all that is required. If one wanted to obtain the same heat efficiency, about 200 horse power would be required during one hour. It is easy to understand from this fact, the very peculiar heat source with which Thermit supplies us. Out of these properties of Thermit we can deduce its applications.

As mentioned before, the development, but more still the introduction, was the work of years. In the course of this lecture you will probably obtain the conviction that although the practical application of the process has already made strides, nevertheless, infinite possibilities of new developments will present themselves. I can only mention here the most important ones and only partly touch on some of these, as Thermit finds uses in a great variety of applications. The principal branches are the following:

1. Metallurgical applications—
 - (a) Production of pure carbonless metals and alloys.
 - (b) Applications in iron and steel foundry practice.
2. Utilization of the alumino-genetic slag, corundum, so-called corubin—
 - (a) For grinding purposes.
 - (b) For ceramics in particular process Dr. Buchner, Mannheim.
3. Hard soldering, applications of sinter Thermit.
4. Welding process—
 - (a) Pipe welding.
 - (b) Rail welding (i) Embedded trolley rails (ii) Exposed “T” rails (iii) Third rails.
 - (c) Application of Thermit or Thermit steel for repairs of all sorts; in particular for maritime repairs and spare castings wanted in a hurry, welding broken bosses of rolls, etc.

The new fire, as you see, has conquered a variety of fields, so that, in order to compare small matter with large, it may be looked upon as a sort of auxiliary industry, like electricity, which

* This address illustrated by lantern slides and practical experiments, proved one of the most valuable delivered at McGill for some time. Most of the experiments were revelations to the audience.

nowadays concerns itself with practically all aspects of our daily life.

A few communications concerning the metallurgical aspect may be given.

As mentioned before, Thermit separates pure metals from their oxides—not only iron, but also chromium, manganese, ferro titanium, ferro vanadium, and many others. In this way processes were elaborated to produce on a large scale carbonless metals of a purity not hitherto obtained. A long standing wish of metallurgists was fulfilled, which electricians could not satisfy in their furnaces, in spite of long continued studies. The metallurgists now proceeded to apply these pure metals in practice. Their successful studies on this subject cannot be sufficiently appreciated.

THERMIT IN THE FOUNDRY.

The possibility of reviving liquid iron or steel locally by this "box reaction" has led to a further application, which has become very important for foundry purposes. In casting steel ingots of more than ten tons, the piping which occurs in the head and which extends through the upper third of the block, causes a great deal of trouble. A box containing from ten to twenty pounds of Thermit, according to the size of the ingot, is introduced just as late as the hardening of the surface will allow its insertion. The reaction will revive the iron in the head and allow the piping to be filled up with fresh steel.

A still more extensive use of box reaction consists of the introduction of Thermit into the risers. Formerly a small can of suitable shape was built into the bottom of the risers. Then it was thought a simplification to insert the box at the end of a rod, into the liquid iron, as it rose. Now, in a number of works, the Thermit is simply wrapped in paper and thrown on the rising liquid metal. This process is equally applied in the iron and steel casting practice. For cast iron the wrapper should contain, at the bottom, a pinch of ignition powder, as the temperature of liquid cast iron is insufficient to start the Thermit ignition. Liquid steel does not require ignition powder. Many faulty castings will be avoided by this application.

CORUNDUM SLAG.

Having shortly touched on the metallurgical aspect of aluminothermics, before proceeding I wish to mention the uses of corundum slag. This artificial corundum, so-called "Corubin" (registered trade-mark), is very different from, and its properties are much more valuable than those of the natural product. The cause is the chemical composition of the two materials. The natural contains various impurities, such as oxide of iron, silica—even small

quantities of water in chemical combination. On the other hand, the aluminogenetic corundum is nearly free from all these, and in particular absolutely free from water. This is no doubt the cause of its greater hardness compared to the natural. In consequence Corubin is used for emery wheels.

AN IMPORTANT APPLICATION.

The most curious and, in a way, epoch-making application, is one of a colleague of mine, Dr. Buchner, of Mannheim. He found that this material had an exceedingly low elastic coefficient and does not lose this property when mixed with a fire-clay binder. In this way he managed to produce vessels for chemical purposes of entirely different properties than the earthenware vessels in use up to the present. You know how easily a porcelain or earthen vessel cracks when exposed to even small changes of temperature. Those made of corubin behave differently. They can be heated to red heat and cooled suddenly with water without showing any tendency to crack. I will demonstrate this by experiment: This vessel, as you see, has entirely lost the character of earthenware. For instance, for hot muriatic acid only enameled vessels could heretofore be used, which were not reliable and of very limited usefulness. Corubin offers, therefore, almost unlimited advantages to the chemical industry. Its highly refractory qualities have introduced it as a coating for bricks and tubes exposed to high temperatures. For these purposes only the corubin resulting from chromium reaction is utilized, of which sufficient quantities are available, in consequence of the large consumption of pure carbonless chromium. This corubin requires a special preparation before being used. The aluminogenetic corubin has proved itself a valuable product for making crucibles for the Thermit welding process. Such crucibles, made according to a certain recipe, will stand from fifty to sometimes 100 reactions.

ALUMINO-GENETIC WELDING

The aluminogenetic welding process, which I now shall deal with, offered this peculiar difficulty. A new fire had been started, over which one had not as yet gained entire control. It is a peculiar fire, which is solid and without flame, and which gives half its weight in the form of liquid metal and the other half in the form of over-heated slag. In the first experiment, iron rods were steeped into the liquid fire, in order to heat them like in a smith's hearth. Then a Thermit was produced which did not liquify, but only sintered and produced white heat. This, however, showed itself more applicable to hard soldering and less to welding. For the former application it is more handy

than a charcoal fire or gas. For welding purposes a different process was found out. The pieces were butted between clamps, a mould put around the joint and into this the liquid mass was poured over the top of the crucible. After obtaining welding heat, the clamps were tightened. It was determined by experiments what quantity was necessary for each section and the results tabulated. The process, of course, does not claim to replace the smith's fire, but to supply its place where the smith's fire would be insufficient. For instance, it has proved itself very valuable in welding lengths of pipes in installing whole systems. It competes successfully with flanged joints, particularly where the pipe system is used to carry fluids or gases which easily destroy their packings; especially for oil, alkaline, acetylene and refrigerators; naturally also for high pressure systems of all kinds. The welded joint is fully as strong as the pipe itself. Recently the manner of welding pipes into "T" shapes has been worked out. It required some little practice to successfully handle the material, but as it obviates keeping a large stock of various sized "T" pieces, it is of considerable importance, especially in outlying districts, mines, etc. The action of the liquid in running out over the lip of the crucible, on to the piece to be welded, is peculiar. The slag corubin flows out first. This solidifies instantaneously on the metallic surface so that the Thermit steel which follows and does not liquify the thin layer of slag, does not touch the welding surface and therefore cannot burn through the wall of the pipe. If the aluminogenetic iron were to come in contact with the metallic piece, it would fuse with it. After the weld is made, the slag and Thermit can therefore be easily removed with a hammer, and the welded joint does not require machining.

PROGRESS IN RAIL WELDING.

To come to the practical side, the first welds were made about four years ago, in the same manner which I described when talking of the welding of pipes. The crucible was emptied by pouring over the lip, the rail ends brought by

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this means to welding heat, were forced together by a strong pair of clamps, so that the section was completely butt-welded. Afterwards the process was considerably simplified by, in a way, reversing it and letting the Thermit iron run out first, followed by the corundum. Over the mould is placed a conical crucible, plugged in the manner customary in our process. As soon as the charge in the crucible is burned down, it is tapped from the bottom and the iron runs into the mould made of refractory material. The highly overheated Thermit steel fuses with the foot and web of the rails to one homogeneous mass, thus forming an immovable solid shoe. As on account of the high temperature, a few pounds are sufficient, the diameter of section is only slightly increased, an advantage which is essential. The heat of the corundum that follows is utilized at the same time to bring the heads of the rail to welding heat. In this way the section is heated equally all over, which is material, to avoid bending of the rails. They will remain in absolutely the same position as when put down before welding and are not held by special clamps or bolts. With new rails and under special conditions, a butt-weld is sometimes demanded. This can be obtained by placing the rail ends into a strong pair of clamps. With well embedded rails and especially where they are anchored, a butt-weld is superfluous. With old rails, the life of which can be considerably lengthened by welding, the use of clamps is impracticable.

I wish to give some details regarding the strength of the welded rail. It is about 80 up to 100 per cent. of the rail itself; you will admit, a very satisfactory result. The resistance of a butt-welded and not butt-welded rail to vertical pressure from above is about the same. The resistance to pressure will not, however, satisfy critics as long as it is to be feared that the heads of the rail might get softer through having been brought to welding heat and develop the well-known hollows at the rail ends. This objection must be treated quite seriously, as all the advantages of the process would be of no avail against such a fault. As a matter of fact, the weld undergoes no change of this or any other sort. I will give practical proof of this. You see before you one plaster cast taken from two Thermit-welded joints. The casts extend considerably beyond the welded zone and beyond all parts liable to suffer. These casts have been taken recently by the management of the Great Berlin Street Railway and placed at my disposal after the joints had been in service for two years and after more than three-quarters of a million cars, not counting the very numerous trailers, had passed over them. The head has remained perfectly

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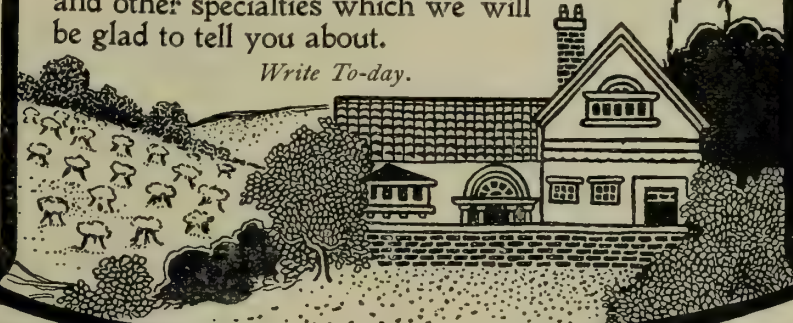
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level and even with the use of a ruler no unevenness will be discovered. This fact disposes most effectually of all fears. Any one can have this fact confirmed, if of two rails of identical material he will have one treated with Thermit and then have test-rods cut out of both. Tensile strength and elasticity will be found equal and unchanged. Theoretical explanations can be easily adduced and have been confirmed by the highest authorities. As the operation takes place without the air having access to the welding zone, a chemical change such as would occur in a coal or gas fire is impossible.

While two years ago only 3,000 joints were welded, last year brought orders for 20,000, which amount has already been passed in the first half of the present year.

A special rail joint calling for remark is that of the third rail. The copper bond in this case is also unsatisfactory, particularly as sometimes very strong currents have to pass through it. Be-

sides, it lies exposed and therefore offers great temptation to thieves. In many cases it is sufficient to weld a small bond of Thermit steel between the two feet of the rail. A piece of tubing is placed over the mould and charged with Thermit. This is ignited and burns down by itself without a crucible being used. The price of such bonds is much below that of copper bonds. In this way, for instance, a suburban track $13\frac{1}{2}$ miles in length was welded and has stood the test of one Winter's low temperature. The joint is mechanically strengthened by one fish-plate on the side opposite to the bond. The Metropolitan Underground Railway of Paris, France, has welded about 20 miles of third rail; in this case the whole section was welded and of course no fish-plates were used.

Thermit, however, is by no means only used for small welds, such as rails and tubes. By the possibility of burning down the largest quantities of Thermit and of obtaining at a moment's notice

any quantity of liquid steel, the process is particularly useful for the largest welds, such as are necessary in ship repairs. A broken stern post, a cracked crank shaft, can be welded without removing it from its bearings.

In the Russian-Japanese war it has played an important part, particularly on the Russian side. "After the first attack of the Japanese on the Port Arthur fleet, orders for several tons were received from the Russian Government. These orders have continued to increase ever since. The remarkably speedy repairs of Russian ships are, according to accounts received by me, in many cases due to Thermit welds.

From what you have seen and heard, you will have perceived that "the new fire" in the short time of its existence has obtained a quite appreciable introduction and conquered a considerable market, but that only the initial work has been done and that the present field of its usefulness—in particular for rail welding purposes—will increase enormously. In the course of time new fields of utility will be discovered for a process which produces in so simple and speedy a manner, without bulky equipment, enormous temperatures and simultaneously overheated liquid iron.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Opened Montreal Office.

THE Booth Copper Co., Limited, Toronto, are sending out cards announcing that they have opened a branch office and factory at 129 William street, Montreal, where they intend giving prompt attention to orders for repairs or new work.

Brushes for the Northwest.

Marshall's-Wells Hardware Co., Duluth and Winnipeg, have ready for general distribution their 1905 illustrated catalogue showing the full line of paint brushes of all kinds made by **J. C. Pushee & Sons,** in Boston. The line includes everything used by the house and fresco painter and artist, or for carriage, car and furniture finishers' use. Dealers in the West can have this catalogue on request.

A Catalogue for Importers.

The Wright & Butler Lamp Mfg Co., Birmingham, and 45 Farringdon street, London, E.C., have prepared an elaborate "Special Export Edition" of their catalogue. This firm are extensive manufacturers of oil lamps and oil stoves of every description, also gas stoves, gas fittings, castings, stampings, etc., and are sole makers of the "Salamander"

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der" oil stoves. The catalogue contains over 200 large pages and is illustrated from cover to cover with the comprehensive assortment of lines offered. As this firm are recognized the world over as one of the most progressive in their line every Canadian importer of lamps or stoves should secure a copy of the catalogue. Readers are requested to mention this paper.

Art Metal Work.

During recent years hardwaremen in all parts of the country have taken an increased interest in art metal goods of all kinds. One of the largest manufacturers of this class of goods in England, **Wm. Souter & Sons, Limited,** Farm street works, Birmingham, have for distribution a catalogue such as is seldom seen on this side of the Atlantic. This catalogue shows hundreds of beautiful designs of table and floor kettles and stands, with spirit lamps, jardinières, fern pots, jardiniere stands, table and wall gongs, umbrella stands and floor gongs, coal scoops, fire screens, cake stands, antique mirrors, hot water jugs, picture frames, etc., lamps and candlesticks, door furniture, etc., tea urns, kitchenware, etc. The chaste beauty of many of the designs is a delight to anyone interested in art metal work. This catalogue is one that

should be of great value to any of the trade interested in the line. It will be sent to any importer who mentions **Hardware and Metal.**

Rex Flintkote Roofing.

J. A. & W. Bird & Co., Berlin, have issued a handsome booklet describing their **Rex Flintkote** roofing and giving views of their exhibit at St. Louis Exposition. Complete, terse and common sense facts regarding the merits of their brand are presented in an interesting fashion, and the booklet should be of interest to hardwaremen. **J. B. Goss,** 27 Common street, Montreal, Canadian representative of this company, will furnish copies to readers on request.

"Superior Jewel" Furnaces.

The Burrow, Stewart & Milne Co., Limited, Hamilton, Ont., have ready their 1904-'05 catalogue of "Superior Jewel" furnaces, registers and ventilators. The Jewel furnaces include hot water, hot air and combination heaters for heating and ventilating residences, stores, churches, schools and buildings of every description. The catalogue is well illustrated, showing by sectional views the good points of the various furnaces made by **Burrow, Stewart & Milne.** The catalogue will be sent to any of the trade on request.

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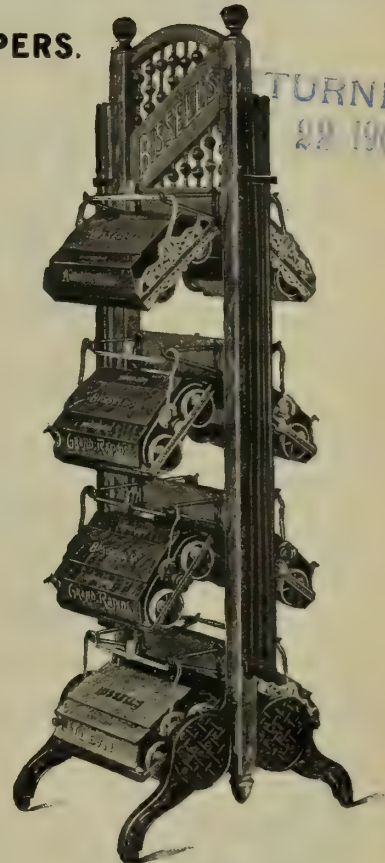
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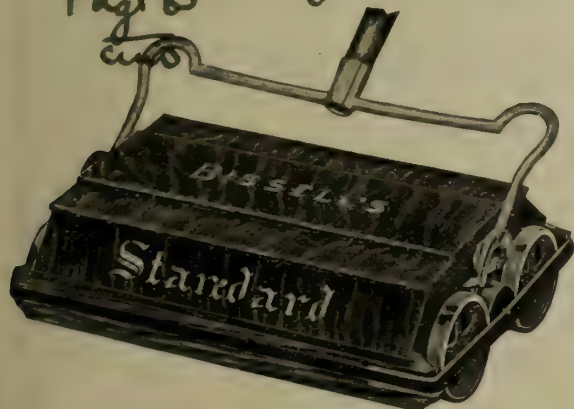
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Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Oct. 20, 1904.

AN active machinery market has prevailed for some time, and while business is still good there has been a slight falling off this week. The machine tool trade in particular seems quiet and for no known reason, although it is said that there is generally a lull immediately after the first Fall livening of trade. Manufacturers, both large and small, are busy in nearly all lines, while in electrical machinery there is unusual activity. Contractors tools, rock drills, compressor mining machinery, boilers and engines, are all in fair demand. Wood working machinery is the most active line at present. It is reported that collections in the outlying districts of Quebec Province are hard to make.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street E.
Toronto, Oct. 21, 1904.

THE machinery market still maintains its activity. The number of orders booked by local dealers has been quite satisfactory, while at the same time there are numerous inquiries coming in. The demand for engines and boilers and wood working machinery is the feature of the market, although there is quite a demand for iron working machinery.

Manufacturers of electrical machinery report their factories running to full capacity, and there is a steady demand reported by dealers.

The World's Coal Product.

THE British Board of Trade has recently issued a circular showing the production, consumption, import and export of coal in the British Empire and the principal foreign countries, in each year, from 1883 to 1903. The product of United States exceeds that of the United Kingdom, but the product of Germany represents only about a half, and that of France and Belgium together about one quarter of that of Great Britain. The total coal production of the world, exclusive of lignite, is now about 790,000,000 long tons per annum, of which the United

Kingdom produces rather less, and the United States rather more, than one-third. As compared with its population, the production of coal in the United Kingdom still exceeds that of the United States. It amounts to nearly five and a half tons per head, while in the United States it is slightly less than four tons per head. In Belgium the amount is about three and a half tons per head; in Germany about two tons, and France under one ton per head. The average value per ton of the coal produced in 1902, taken at the collieries in the different countries referred to, is given as follows: United Kingdom, \$2; Germany, \$2.12; France, \$2.80; Belgium, \$2.53, and the United States, \$1.36.

Machinery and Electrical Notes.

The comb factory of R. B. McComiskey & Co., Granby, Que., was destroyed by fire on Oct. 13.

The Henderson Roller Bearing Co. of Canada, Limited, head office and factory at Toronto, proposes to erect a factory in Winnipeg.

The Board of Trade of Barrie, Ont., are considering a proposition from a shoe manufacturing concern who wish to locate a factory in that town.

The Niagara, Queenston and St. Catharines Railway Co. are calling for tenders for the construction of the roadbed and wooden trestles for the total length, 22 miles.

A branch factory of the Myers' Royal Spice Works, an English concern, is to be erected at Niagara Falls, Ont. The construction of the factory is being looked after by T. Myers, president of the company.

Among the shipments of machinery made during the last week by the Levy, Weston & McLean Machinery Co., Front street, Toronto, are: 18x34 Wheelock engine to Tillsonburg Electric Light Co., and planing mill outfit to Mr. George, Erora.

The town of Gainsboro, Man., has offered H. D. Cameron, Glencoe, Ont., a \$3,000 bonus with free mill site and exemption from taxation for 10 years, for the erection of a 100 bushel grist mill.

The Capilano Lumber Co., Vancouver, B. C., propose to erect a new saw mill on Lynn Creek.

The General Illuminating Co., Limited,

Ottawa; capital, \$50,000; purpose, to carry on business of supplying gas and electric power for lighting and heating purposes. The directors are: F. H. Bronson, E. P. Bronson, W. G. Bronson, L. Crannell and E. A. Lesueur, all of Ottawa.

The Town of Preston has passed a by-law granting a loan of \$15,000 to the Metal Shingle and Siding Co., Limited, who recently had their plant entirely destroyed by fire. The company propose to erect a new plant, and the town has security of a mortgage on the new buildings.

The Jones & Moore Electric Co., Adelaide street, Toronto, have at the present time the following large contracts on hand: Electric lighting for Wm. Simpson, Toronto; Electric lighting for the post-office and customs house at Toronto Junction, and electric lighting for Menzie Wall Paper Co., Toronto.

City Engineer Rust, of Toronto, has prepared his figures for the new span bridge to be constructed over the lagoon between the western sandbar and Hanlan's Point, to take the place of the old wooden bridge at Turner's baths. To furnish a 45-foot steel span and construct the necessary approaches will cost \$5,000.

A dispatch from Montreal says that the Canadian Pacific Railway, as the result of Americans securing the controlling interest in the Granby Mining and Smelting Co., is concluding negotiations for a deal by which it secures the control of the water powers at Cascade, B. C., with a view of erecting a smelting plant at that point. Up to the present the Canadian Pacific has carried a large amount of ore tonnage to and from the Granby plant, and it is with a view of retaining control of this traffic that the new plant is proposed.

The Wm. Kennedy & Sons Co., Limited, Owen Sound, Ont., are under contract with the Cataract Power Company of St. Catharines to supply them with eighteen headgate winches, sixteen of one type and two somewhat different. These winches are for controlling the water entering the flumes. The company is also building a special apparatus designed to shut the headgate in the case of a sudden escape of water below.

THE IMPACT STEAM TURBINE.

IN so far as the reciprocating steam engine is concerned the problem of thermodynamic energy conversion is to-day little nearer its solution than it was more than a century ago. Ideal in its complex construction and revolutionary in its application and achievement,

thermodynamic conversion is expressed by the Carnot cycle represented in the formula :

$$\frac{T_1 - T_2}{T_1}$$

This means that for the highest effi-

cal operation with the steam engine, is not and never can be accomplished. The reasons for this, now so well known, need not here be enumerated.

When the science of steam engineering was thoroughly understood and the defects of and the improbability of further than mechanically improving the steam engine were realized, engineers and inventors with more or less success set about devising means for the mechanical utilization of heat energy by methods promising a closer approach to the ideal than is possible with the reciprocating engine.

The steam turbine in principle and even in type is not new, being in fact the first heat motor recorded in the history of steam engineering as far back as 120 B. C., when Hero, of Alexandria, describes an apparatus for utilizing heat energy. This apparatus, a reaction turbine, consisted of a spherical vessel mounted on trunnions, through which steam was admitted, to finally issue from openings tangential to the sphere. Many centuries later, in 1629, the Italian, Giovanni Branca, brought out the impact turbine, employing a jet of steam to impinge upon vanes or blades of a wheel. This latter, familiar to us in the hydraulic motors of the Pelton type, exhibits in general principle the characteristic features embodied in the present day De Laval steam turbine.

Thus we see as early as 1629 the introduction of the reaction and impact turbine, although of imperfect form and not capable of practical application, and all attempts at perfection along these lines have until a comparatively short time ago, proven unsuccessful; this was probably owing, however, to the interest aroused by the success of Newcomen in 1705, and later, by Watt and his followers, in the development of the reciprocating engine.

The steam turbine in the form produced by De Laval is characterized by the great simplicity of its construction and the directness of its energy conversion producing adiabatic and complete expansion, ideal conditions which can

the steam engine originating with Newcomen and perfected by Watt is, however, very far from perfect as a heat engine, and there is little prospect that future improvement will bring this type of heat motor any closer to the ideal. This assumption is, to some degree, borne out by the fact that the improvements ever since the days of James Watt have only been mechanical, and even though these improvements naturally have increased its efficiency, the steam engine of to-day in its ingenious and complex perfection, thermodynamically presents practically no improvement over that of Watt.

The conversion of heat energy by means of the steam engine is accomplished by allowing steam to expand behind the piston, not utilizing its kinetic energy, but subjecting it to a resistance corresponding with its pressure. The ideal efficiency of this process and in fact the solution of the problem of

efficiency obtainable the steam should be expanded from maximum to minimum pressure and temperature, and, furthermore, this expansion should be adiabatic, which, as is well known, in practi-

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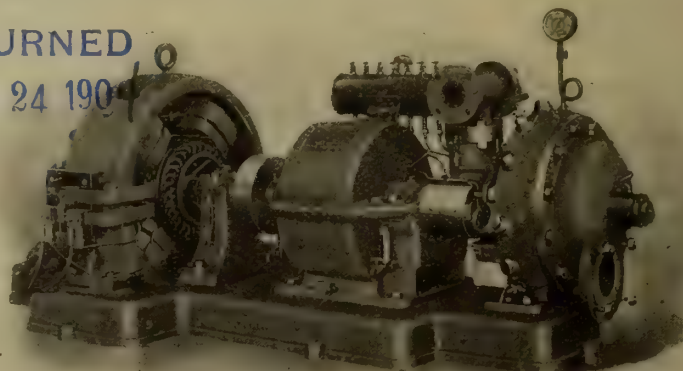
To Mr. [unclear]



No. 1—The De Laval Turbine Wheel and Nozzles.

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OCT 24 1904



No. 2—Steam Turbine Dynamo, 30 H. P., 20 K. W., direct current.

CONDENSED MACHINERY ADVERTISEMENTS.

never be obtained with the steam engine. That the steam turbine which now more than rivals the steam engine, should have been known at such an early date and yet should have been so long delayed in its perfection in a practical form may seem astonishing. This, however, is not remarkable, for even if, as is improbable, the high efficiency of the steam turbine had been realized by Hero, Branca, and others of early times, a practical machine could not well have been produced for want of materials and tools of such refinement and quality as we to-day know are as essential to the construction of a successful steam turbine as are the principles involved. The steam engine, less exacting in this respect, has been the natural forerunner producing the favorable conditions that have enabled us to weld another link to the chain of evolution. The Impact Steam Turbine.—2 col head tions in heat engines.

The speed of the turbine wheel which for V. 4,000 ft. and for the maximum of efficiency should be about 1,800 ft. per second, or about 21 miles per minute, is, however, much lower, as it has been found difficult to produce a material for the wheels that with ample margin of safety would withstand the strains produced by the centrifugal force at this high speed. At the present time the speed does not actually exceed 1,350 ft. per second, which, in the above case, would give a steam consumption of 9.8 pounds per theoretic horse-power.

The importance of a high steam pressure and a good vacuum when operating the steam turbine may be clearly shown. Not that the steam turbine cannot, as far as the mechanical results are concerned, be operated equally well with low pressures and non-condensing, and even then successfully compete with the reciprocating engine, but whenever the very best economy in operating is sought for, high pressure and a condenser should be used; and, as the difference and gain in economy in the case of the steam turbine is more marked than in the reciprocating engine, it will be found in many cases, even in comparatively small sizes, of advantage to operate condensing, and even to do so in places where the scarcity of water would render the employment of a cooling tower necessary.

A characteristic feature of this steam turbine is that none of its running parts are subject to the full pressure of the steam, as the steam is fully expanded in the nozzle before it reaches the turbine wheel. This feature will not be found in any other heat motor, is of great value and promising future in the direction of using high pressures with resultant increase in economy of fuel. The restriction as to the steam pressure that can be used is found only with

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MACHINERY WANTED.

Items under this heading inserted free for readers of
HARDWARE AND METAL

GASOLINE ENGINE WANTED—Six horse-power, complete; cash price. S. S. Morris, Rodney, Ont.

SMOKESTACK WANTED—40 or 50 feet of 24-inch stack; new or second-hand; in first-class condition; also small lath machine. Box 80, Providence Bay, Ont.

SCALES—Heavy; double iron column dormant scales; double beam; for grain warehouse. Box 36, Hensall, Ont.

WANTED—Second-hand duplex pump; about 10 x 6 x 12; state particulars by letter. John E. Russell, 908 Queen street east, Toronto.

WANTED—Second-hand Gasoline Engine. 15 h.p., with 3½ in. pulley. Must be in good repair and cheap. James Leach, Eden, Ont.

WANTED—10 h.p. Motor of 110 volts. State how long in use and lowest price. Address P.O. Box 378, Winnipeg.

WANTED—To purchase at once for cash, small second-hand Gasoline Engine, 4 h.p., full outfit. Apply R. Gillespie, Norwood, Ont.

WANTED—Good second-hand pair tinner's squaring shears, either 24 or 30 in. cut, state make, how long used, condition and price. Bennett & Son, Gananoque.

WANTED—Second-hand Plate Chopper. Pulleys and Shafting to connect. Lock Box 22, Burford.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, HARDWARE AND METAL, Montreal.

ENGINE FOR SALE—20 h.p.; stationary, side crank. Price \$80. Address Box 41, HARDWARE AND METAL, Montreal.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.

MACHINERY FOR SALE.

SECOND-HAND saw-mill machinery for sale. Buyers are requested to write regarding the below to W. H. COWELL, HARDWARE AND METAL, 10 Front St. East, Toronto.

1 Watrous Side Crank Engine, cylinders 12 x 14 in.; ¾ in. shaft.

1 Fly Wheel Pulley, 18-in. face, 6-in. dia.; 1 Driving Pulley, 12-in. face, 36-in. dia.; 1 Driving Pulley, 8-in. face, 26-in. dia., bore 5½ in.; bore bushed to 4¾ attached, out-board bearing.

1 Return Tubular Boiler, 52-in. dia., 14 ft. long, 52 8½-in. tubes.

1 Shaft, 2-in. dia., 9 ft. long; 1 pulley, 5½-in. face, 6-in. dia., wood; 1 pulley 6½-in. face, 10½-in. dia., iron attached, 2 bearings.

1 Shaft, 2-in. dia., 37 in. long; 1 Pulley, 5½ x 24 in.; 1 Pulley, 6½ x 10½ in., attached, two bearings.

1 Shaft, 2½ in. x 15 ft. 10 in.; 1 Cone Friction Pulley, wood, 10 in. thick, 13½ in. small dia., 32 in. large dia.; 1 Pulley, 11 x 30 in., wood; 1 Pulley, 4 x 10 in., wood; 1 Pulley, 7 x 48 in., iron attached, 3 bearings.

1 Shaft, 2¼ in. x 7 ft. 11 in.; 1 Cone Friction Pulley, iron, 7½ in. thick, 14 in. small dia., 28½ in. large dia.; 1 Pulley, 10 x 24 in., iron attached, 2 bearings; 1 Eccentric, for throwing frictions in and out of gear.

1 Shaft, 1¾ in. x 9 ft.; 1 Friction Pulley, 8 x 10 in., winding wood drum, 6 in. x 4 ft. 6 in., 4 in. flanges, attached, 2 bearings.

1 Shaft, 1¾ in. x 5 ft.; 1 wood pulley, 10 x 76 in., 2 bearings attached.

1 Belt Tightener Pulley, 16 x 20 in., in swinging frame, 1¾-in. shaft, 2 bearings.

1 Shaft, 2¼ in. x 9 ft.; 1 drum, 10 in. x 3 ft. 7 in., 12½ in. flanges; 1 pulley, 7 in. x 45 in., wood, 2 bearings attached.

1 Rogers Pat. Emery Wheel, saw sharpening machine, manufactured by Hart Emery Wheel Company, Hamilton, Ont.; takes 84-in. saw; counter shaft and pulleys for same.

1 Piece of Shafting, 4¾ in. x 10 ft. 2 in.

1 14-in. Edging Saw.

1 49-in. Circular Saw.

1 52-in. " "

1 60-in. " " inset teeth.

1 28-in. Slab Saw on arbor and frame.

9 Slab Rollers, iron, 20 x 10 in. dia. in bearings, 2-in. shafts.

1 Edging Table, 15 ft. long x 17½ in. wide, on iron wheels, and bed with iron rails, 32 ft. long.

1 ¾-in. Saw Arbor, in frame, also friction pulleys, levers and gear for operating log carriage, complete.

1 Log Carriage Rack, driven on iron rails, complete.

1 Pulley, 6 x 18 in., 2-in. bore.

1 Paper Pulley, 6-in. face, 11½ in. dia., 13 in. dia. over flanges, 2-in. bore.

46 ft. of new Main Belting Co.'s Leviathan Belt, 14 in. wide, ½ in. thick.

Also a lot of second-hand belting, some of which is in fair condition. The machinery is in good condition. There is no smoke stack. Boiler front and grates in good condition; boiler in brick setting. Write regarding above to W. H. COWELL, HARDWARE AND METAL, Toronto.

IF you want to Buy Machinery of any kind We will insert an Announcement Free.

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Hardware and Metal and Canadian Machinist
MONTREAL TORONTO WINNIPEG

the boiler, and as far as the steam turbine itself is concerned, it has been operated successfully with a pressure as high as 3,000 pounds per square inch.

The De Laval steam turbine is a high speed rotary steam engine, in design and construction adapted for all purposes where the common reciprocating steam engine is now used, and for many other purposes where for various reasons no other type of engine meets hitherto impossible conditions. This is especially the case where great efficiency, great uniformity of rotation and close regulation are important, as when used in connection with electrical machinery, centrifugal pumps, fans, blowers, etc. Its high speed and the directness of its energy conversion decreases the dimensions and weight, and simplifies the construction without impairing its efficiency, advantages which do not exist with the modern steam engine, where great bulk and complexity are features indispensable to highly efficient operation. Its principal advantages are: no

ment of a single bearing, and at the end of this time not showing any appreciable wear.

The De Laval steam turbine is particularly well adapted for direct connection to dynamos, centrifugal pumps, blowers, fire engines, etc. All such units are built and tested in the works, which is a decided advantage over the old method of buying an engine from one place, a generator or a pump from another, and having them fitted together on the ground where used, oftentimes with great expense and delay, and probably a poor piece of work as the result. All machines are ready when taken from the car to be set down and operated wherever convenient, nothing being necessary but the connection of steam and exhaust, and switch-board connections in case of dynamos.

High Speed Steel.

Alexander Gibb, 13 St. John street, Montreal, who is agent for J. Bradshaw

patient has been placed in a dark room, exposed to a blue light of 16 candle power for three minutes, after which time a tooth was extracted, not only without pain, but with the absence of all the effects that usually follow the use of ether or chloroform.

Incandescent Lamp Bulb.

A NEW bulb for incandescent lamps has recently been patented by F. M. F. Cazin, of Hoboken, N. J., which is a decided departure in that line. Whereas the present practice is to enclose the filament in one bulb, this lamp has two bulbs, one enclosed within the other. It is well known that glass is a good conductor of light and a poor conductor of heat, thus while with two bulbs but little light is retarded, the major portion of the heat is kept within the lamp bulb. The use of two separate factory-made bulbs increases the glass blower's work and also results in a more uniform product. The inventor has incidentally utilized the presence of a double glass wall in housing the luminant for the purpose of differential cooling of a limited minor part of the inner glass wall exclusively exposed to air circulation, such differential cooling having a new and useful effect of concentrating on the better cooled heart of the inner glass any and all condensation of vaporized matter escaping from the luminant under current.

The Montreal Electrical Handbook.

THIS is one of a series of ten similar handbooks prepared, under the auspices of the American Institute of Electrical Engineers, by a local committee at the different centres visited by the European electrical engineers who came to this country as delegates to the International Electrical Congress. It is profusely and handsomely illustrated with historical as well as industrial views. There is a brief history of Montreal followed by detailed accounts of the different electrical companies and water power developments in the vicinity. The Canadian Westinghouse works at Hamilton and the Canadian General Electric at Peterborough are also described as well as the water-power development at Ottawa and Niagara.

It is an interesting and instructive volume and although issued as a complimentary edition there are a few left which are being sold at one dollar a copy. These may be had from the Canadian Westinghouse Co., Montreal.

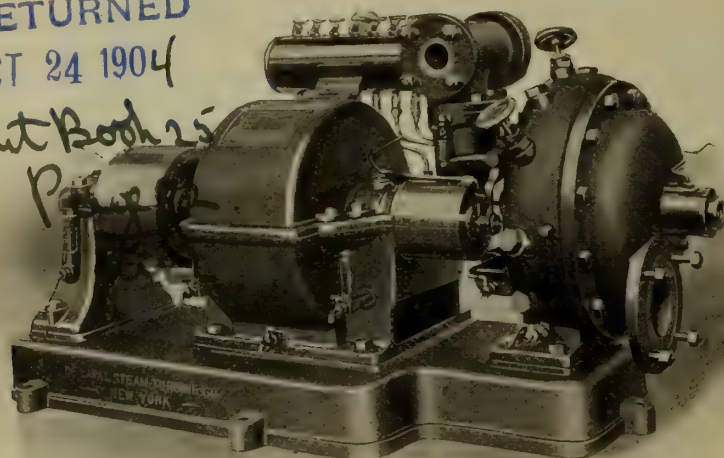
Effects of Blue Lights on Pain.

In a report to the State Department, Consul Liefeld, Friedburg, Germany, tells of some interesting researches carried on by two professors of Geneva. They have discovered that the nervous system is influenced by colored light, and upon further experiment they found that blue light has a soothing effect. A

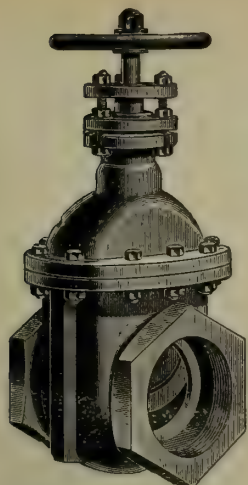
leakage from wear, no bearings to adjust, small friction loss, high efficiency with variable loads, no moving parts under pressure, close speed regulation, simplicity of construction, perfect balance, small foundation, small space occupied, ease of erection, automatic oiling, no danger from water, and long life.

As the motion of the turbine is entirely rotative, no adjustment of bearings whatever is necessary, and even should these become considerably worn, no bad effects will result. However, the pressure exerted on the various parts is so slight that the wear is surprisingly small, being much less, in every case, than with a steam engine used under the same conditions. Many have been in constant operation in Europe from periods ranging from five to seven years without requiring the renewal or adjust-

& Son, Limited, Baltic Steel Works, Sheffield, has in stock a supply of their "Conqueror" brand of high speed steel. Reference has been made in these columns before to the very satisfactory tests of this steel which have been made in England. This steel has been found to do very satisfactory work at a remarkably fast rate of speed.



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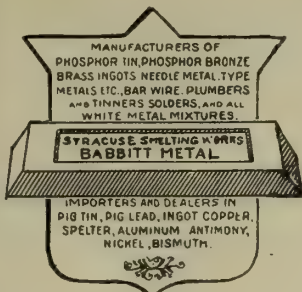
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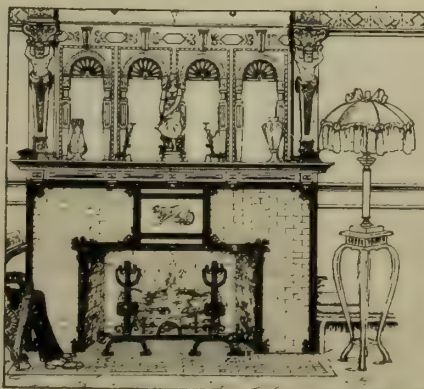
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COKE MAKING IN BRITISH COLUMBIA.

FROM the following extracts from "Mining in British Columbia," which has just been issued, readers of Hardware and Metal will get a conception of the coke industry of the Crow's Nest Pass Coal Co.:

"As nearly one-half of the coal produced at these (the Crow's Nest) mines in 1903 was made into coke, it will be seen that coke making constitutes an important part of the Crow's Nest Pass Coal Co.'s operations. The physical conditions at Coal Creek and Morrissey are such that a departure from methods prevailing at most collieries where coke is made has been necessary, for, owing to there not being room in the valleys near the mines for a sufficient number of coke ovens, these have had to be built away from the mines. The ovens of the Coal Creek Colliery are at Fernie, between four and five miles from the mines; the Morrissey ovens are nearly two miles from the mines. The slack coal for coking in these ovens is loaded directly on to railway dump cars and hauled to big slack storage bins built near the ovens. At Michel the slack is collected from the screens in pockets, conveyed to an elevator, discharged on a second conveyor, and distributed to the slack bunkers as required.

"The coke ovens are of beehive shape, diameter 12 feet, and have a circular 'eye-hole' or chimney at the top. They are built in double rows, of fire-brick, with supporting walls and piers of stone masonry filled in between with fire-clay. A single standard-gauge railway track runs along the top of each battery, and on this are hauled, by light steam locomotives, the side-discharge steel lorry cars which charge the ovens with 6½ tons of slack each. The production of coke per charge is from 3.90 to 4.22 tons, the average being one ton of coke from 1.6 ton of coal. The time of burning is 60 to 72 hours, which gives a daily production per oven at the rate of 1.3 to 1.6 ton. No provision is made to recover the by-products. The coke is 'quenched' or cooled and the dirt washed off by hose-watering inside the ovens. Thus treated it contains less moisture when drawn from the ovens on to the shipping wharves. The coke is generally long, lustrous and firm, containing up to 94 per cent. fixed carbon, 4.50 per cent. ash, and 0.75 per cent. sulphur. There are 424 ovens at Fernie, 464 at Michel, and 240 at Morrissey, together 1,128 ovens. These are equal to a maximum daily production of about 1,500 tons. A considerable number of the Michel and Morrissey ovens were only recently completed.

COAL AND COKE PRODUCTION.

"The approximate producing capacity of the several collieries is as follows:

Coal Creek, 1,400 tons; Michel, 1,600 tons; and Morrissey, 1,000; total, 4,000 tons (of 2,000 pounds) per diem. A gradual increase on this output will be practicable as development shall proceed. The total output for six years was as under:

Year.	Coal. Tons.	Coke. Tons.
1898.....	8,986	361
1899.....	116,201	29,658
1900.....	232,345	72,810
1901.....	425,457	125,085
1902.....	441,236	120,777
1903.....	661,118	167,739
Total.....	1,885,312	516,430

"Of the foregoing gross output of coal, nearly 1,000,000 tons (less what was used under the collieries' boilers) was sold, and the remainder made into coke. The output for 1902 was unfavorably affected by a series of adverse circumstances, the most serious of which were a disastrous explosion at Coal Creek, which wrecked two of the most productive of the mines (these have only recently been fully restored), and labor troubles at all three collieries. The proportion of total output for 1903 contributed by each of the three collieries was as follows:

Colliery.	Coal. Tons.	Coke. Tons.
Coal Creek Mines....	242,673	94,441
Michel ".....	263,590	72,598
Morrissey ".....	154,855	700
Total.....	661,118	167,739

"The coal exported in 1903 amounted to 162,952 tons. Of the remainder of the year's total production, 195,999 tons were sold in Canada, 279,334 tons sent to the coke ovens, and 22,833 tons consumed under the collieries' boilers. There were 31,089 tons of coke exported to the United States, and the remainder of the total produced was sold to British Columbia smelters. It is expected that during the current year there will be a much larger quantity of both coal and coke exported to the United States.

"The average number of men employed at the company's collieries in 1902 was 984, and in 1903, 1,450. About the middle of last December the number on the company's pay-rolls was as follows:

	Miners.	Ovenmen.
Coal Creek Colliery.....	427	117
Michel ".....	581	165
Morrissey ".....	291	25
Total.....	1,301	247
Miners, as above.....	1,301	
Men on general construction work....	250	
Management, engineering and clerical, ..	37	
Total.....	1,835	

"As to the cost of coal and coke, legislative restrictions prevent the Crow's Nest Pass Coal Co. from charging more than \$2 per ton for 'run of mine' coal at the mines, so this will doubtless be the maximum charge, while competition may later bring the price lower. Coke

is supplied at \$4.25 to \$4.50, f.o.b., and freight to boundary points is \$3 to \$2.25, so about \$6.50 per ton is the cost delivered at the boundary smelters. Coal from Vancouver Island collieries used to cost \$10, and coke \$11, delivered at about \$5, and coke at about \$6; so the beneficial influence of the Crow's Nest Pass coal fields has here been unmistakably demonstrated by a reduction in cost of fuel of nearly 50 per cent.

TRANSPORTATION FACILITIES.

"Two railways give the Crow's Nest Pass coal fields access to markets for their coal and coke. The Canadian Pacific Railway Company's Crow's Nest line leaves its transcontinental road at Dunmore Junction; Assiniboia, reaches Michel at 224 miles, Fernie at 217 miles, Morrissey Junction at 256 miles and Kootenay Landing at 394 miles. From Kootenay Landing to Nelson the distance is 52 miles, of which distance 32 miles, to Proctor, is by water, the freight cars being transferred on large scows or barges, each carrying ten cars. Smelting points in British Columbia reached by C.P.R. are distant from Fernie as follows:

Nelson, West Kootenay.....	199 miles.
Trail ".....	251 "
Grand Forks, Boundary.....	299 "
Greenwood, ".....	318 "
Boundary Falls, ".....	321 "

"The distance from Morrissey colliery ovens, to which a four-mile spur runs from Morrissey Junction, are five miles less than those given above, whilst from Michel they are 23 miles more. From Fernie east to Lethbridge the distance is 140 miles, or from Michel 117 miles. From Lethbridge to Montana smelting points the distances are as under:

Great Falls.....	215 miles.
Helena.....	314 "
Butte.....	387 "
Anaconda.....	413 "

"Connection is made with these several points over the Great Northern Railway Company's Great Falls and Sweet Grass lines.

"The Great Northern Railway taps the Crow's Nest Pass coal fields on their western side by its line from Jennings, Montana, to Swinton, British Columbia, the latter point connecting with the C.P.R. at Morrissey Junction, 1 mile, and Morrissey Mines, 5 miles. This railway is now being extended from Swinton to Fernie. The distances from Jennings to the several collieries are:

Morrissey Colliery.....	104 miles.
Coal Creek Colliery (at Fernie).....	114 "
Michel Colliery.....	137 "

"Jennings being on the Great Northern's transcontinental line, the foregoing mileage will serve to show the distance coal has to be hauled to reach that line. The Great Northern also has a railroad from Spokane, Washington, to Nelson, B.C. Coke is obtained from Morrissey for the Le Roi smelter at Northport, Washington, a few miles south of the

international boundary. If hauled via Jennings and Spokane, over Great Northern tracks all the way, the distance is 405 miles, but if taken by C.P.R. to Nelson (194 miles) and thence over the Great Northern's Nelson and Fort Sheppard railway, the distance is 265 miles.

"These railway distances are given with the object of showing how the coal fields are situated in relation to railways and smelters, which are, and will continue to be their largest customers for fuel, the former for coal and the latter for coke."

0.25 to 2.03, and the ash from 6.0 to 13.8; the coals with the highest ash not necessarily containing the highest percentage of sulphur. Then a coal with 10 per cent. of ash contained 0.32 of sulphur and another with 6.53 of ash 2.0 of sulphur. Sulphur occurs in coal partly in the form of organic sulphur compound. Phosphorus is usually absent or is present only in very small proportion and, unlike the sulphur, it depends almost entirely on the presence in the coal of inorganic phosphorus compounds.

THE PHYSICAL PROPERTIES OF FURNACE COKE.

IN Le Genie Civil it is observed that when coke began to be substituted for charcoal in furnace practice a light porous coke had to be produced, owing to the furnaces in use being low ones of small capacity, using cold blast in which a hard coke would ascend almost unchanged to the tuyere level. Now the reverse of this is the case. The coke has to be dense and compact, capable of bearing the weight of a heavy furnace charge. This resistance of the coke depends on the value of the coal coked and on the method of coking adopted. Coal yielding over forty per cent. of volatile product, or less than nineteen per cent., is scarcely susceptible of being made to yield a coke of the character required. The best coke as a rule is obtained from coal yielding from twenty to thirty per cent. of volatile product. The shape and temperature of the coking oven again require to be carefully studied for every fuel, but this is of less importance than the nature of the fuel itself.

In the article are enumerated the series of experimental results collected from various sources showing the character of the coke produced from a number of coals in numerous types of ovens. These results relate to coals varying within the coking limits as to volatile products. The coke produced varying in density from 0.6 to 1.1 the resistance to crushing from 355 to 1,780 lbs. per square inch, and the ash from 5 to 15 per cent. The results, with few exceptions, show that the density increases with the crushing strength of the coke. In the case of one kind of coke it was found that as the density diminished from 0.82 to 0.6 so too did the crushing strength from 640 to 355 lbs. per square inch. Again it must be remembered that as the size of the coke varies its behavior in the glass furnace will also change. To ascertain the cohesion it should be tested in a revolving drum about a yard in length with wings attached to the inner surface and making 25 revolutions a minute. About 100 lbs. of coke of the size received from the oven being charged, the revolution of the drum should be continued for six minutes. Under conditions such as these coke of good quality should show about 70 per cent. residue, which will remain on a sieve of 1.6 inch square mesh. All

such experiments as this are subject, however, to the grave error of having been made at the ordinary temperature, while in the furnace they would be exposed to pressure while at an elevated temperature. In some experiments by Sir Lothian Bell, who determined the strength of the coke at the temperature of the escaping furnace gas, it was found that while the strength of the coal coke was 590 lbs. per square inch, it fell to only 398 lbs. when the coke was at the temperature referred.

The apparent density of a coke varies very greatly from the real density. It may be remembered for comparison that the density of retort carbon is 2.35, that of graphite up to 2.75, and that of the diamond about 3.5. The density of the coke greatly affects the action of the gases on the coke. The quantity of moisture which a coke made from bituminous coal alone will absorb varies from 28 per cent. to 31 per cent. of its weight. Coke is less hygroscopic than wood-charcoal, and is much less porous. The weight of a cubic foot of lump coke is about 28 lbs. If made from unwashed coal it usually contains from 12 to 15 per cent. of ash, and from unwashed coal about 6 to 9 per cent. The coal of the United Kingdom is relatively free from any ash.

The percentage of sulphur in coke varies very greatly, being usually less than that which existed in the coal coked. In examples given it was from

Locomotive Built in Toronto.

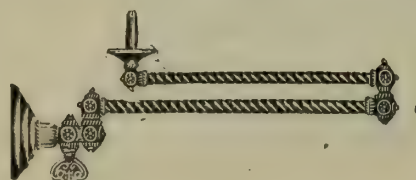
THERE will shortly be completed at the Canada Foundry works a magnificent locomotive for the Canadian Pacific railway, the first of its kind built in Toronto for a great many years. There still lingers around railway circles the story of an engine built in the city for the Great Northern Railway about 40 years ago. This engine was a wheezy, leaky concern, and from that day until the enterprise of the management of the Canada Foundry Company took up the work there have been no more locomotives built in Toronto. The company has a contract with the Canadian Pacific Railway for a number of engines, all of the largest and the most modern type. The progress made in the building of these engines, and these splendid work put on them, has caused the liveliest satisfaction in railway and engineering circles, as it is evident the very best and largest engines can now be built in Toronto.—

The Dominion Government have awarded another contract for 10,000 tons of steel rails to the Consolidated Lake Superior Company, Sault Ste. Marie, Ont. This makes 20,000 tons which the Soo company are to supply to the Intercolonial. They are to be delivered at Montreal before the close of the present season.



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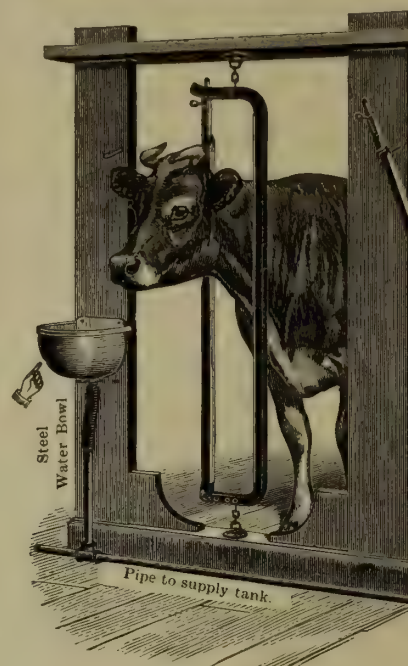
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Burns Coal, Coke or Wood.

No.	Cooking Holes	Size of Oven, Ins.	Length of Wood Fire Box, Ins.	Shipping Weight, lbs.		Sq.	Tel. Code	Ext.
				Sq.	Reser.			
9	4 9-in.	16x21	21	240	250	Canoe	Camlet	

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HARDWARE AND METAL

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BRITISH DISSATISFIED WITH DUMPING CLAUSE.

THE friendly feeling engendered by the preference given in the Canadian tariff to British manufacturers and exporters bids fair to be in large measure counterbalanced by the inconvenience to which they are now being subjected in following out the regulations of the anti-dumping clause.

The preference has been appreciated, and rightly so, which gave to the British merchant a start in a race with his competitors from other countries. The German surtax gave him another advantage. Both of these tended to create a better sentiment and draw the bonds of the Empire closer together.

The dumping clause, however, with its red tape and other appendages, recently introduced by our Minister of Finance, has come in for a great deal of unfavorable comment on the other side of the water. While it seems proper in its conception and just and justifiable in its salient features, its accomplishment is attended by clumsy regulations and has called into play conditions and situations probably never suspected by its

framer. Furthermore, it reacts against the shrewd business man and places a premium on brains and keen business foresight.

A specific case of this was mentioned in these columns last week, in which a Canadian importer bought, for forward delivery, on an advancing market, and had to pay the duty on the new price and the difference between the former and the then selling price.

This is the main point to which exception is taken by the British exporter when he sells goods delivered in this country. Then, again, being accustomed to ordinary tariff regulations, he is annoyed by the intricate forms to be filled out, and the declarations to be gone through that the goods are of British manufacture, and if not, the necessary double packing, double entries, and increased cost of shipping.

With regard to the working of the clause itself, he is in the same position as the importer mentioned above, when he sells goods to be laid down in Canadian ports. He disposes of a bill of goods for future delivery. The prices go up and he must pay his duty on the advanced price and the difference between that and the former, up to the limit required by the regulations as well. Surely the clause was never intended to work thus detrimentally to legitimate business.

CANADIAN INDIFFERENCE.

NOT long ago the foreign representative of an American manufacturing firm remarked to a representative of this paper that Canadian manufacturers were not as much is evidence abroad as one would expect, and that too frequently where Canadian products were actually to be found the markets were so inadequately cared for as to be practically barren of reasonable returns. Meanwhile foreign competitors were camping in their tracks and reaping the fruits of a systematic exploitation of such markets.

As if to lend additional color to the above remark comes the news that not a single Canadian manufacturer has availed himself of the generous offer of Sir Alfred Jones, manager of the direct steamship line between Canada and South Africa, to provide members of the Canadian Manufacturers' Association with free transportation to Cape Town.

Evidently they have not thought it worth while to send over a commercial representative or even a trunk of samples or exhibits to the fair that is being held there during the present Autumn.

No one dreamed but that Canadian exporters would have jumped at the chance of sending over a few of their number to look into trade conditions in South Africa in view of the fact that it is bound to become one of the largest importing countries of the world within the next few years, and the key to the situation will undoubtedly be in the hands of those early in the field. It is no secret that American firms are reaching out after this trade, and in some cases have been extraordinarily successful in establishing a permanent market for American products. If one is to judge from appearances, however, Canadian manufacturers, instead of grasping the golden opportunity at the proper moment, are not only willing to let it pass them by but are deliberately turning down an invitation to go over and capture a share of South African trade. Canadians scarcely deserve the favor with which they are looked upon in South Africa. Yet the fact remains that a Canadian workman is regularly given the preference over a foreigner, and a product "Made in Canada" appeals irresistibly to the South African consumer. For this reason it is particularly unfortunate that the manufacturers have not thought it worth while to take a step which would have given an impetus to Canadian trade all over South Africa. They need blame no one but themselves if continued exhibitions of such indifference ultimately lose them one of the greatest markets of the twentieth century.

A RED TAPE POSTAL SYSTEM.

THE red tape system of permanent officials in the British postoffice is proverbial. Several instances of this have recently come under the observation of Hardware and Metal, two of which might be cited. For instance, a letter was addressed to the editor of the Daily Post, London, Eng. Now while there is no Daily Post there is a Morning Post published in London, Eng., but the postoffice authorities could not deliver a letter thus addressed, and forthwith returned it to this office, stamped with the words "in-

sufficient address." The editor also sent a letter addressed to "Mr. Harold Cox, secretary of the Cobden Club, Manchester, Eng." Mr. Harold Cox is known the world over as the secretary of the Cobden Club, but the postoffice authorities in Manchester did not know him. It was doubtless *infra dig.* for them to look up a city directory and get Mr. Cox's city address, and so this letter was also returned stamped with the words "insufficient address."

In Canada the postal system may not be perfection, but Postmaster-General Mulock would, we fancy, decapitate the official head of any one if he turned over to the dead letter office letters similarly addressed.

Canada is a country of magnificent distances. From the Atlantic to the Pacific it stretches over 3,000 miles, but in spite of this letters sent to this country from Great Britain, often with addresses much more obscure than those sent by this office to the Morning Post and to Mr. Harold Cox, would have reached their destination. For instance we often get letters addressed to Hardware and Metal, Canada, and not long since a letter addressed by a business firm in London, Eng., to a Mr. John Blank, Owen Sound, Toronto, United States, was delivered by the Canadian postal authorities into the hands of the person for whom it was intended.

Surely if Canada can deliver letters which do not contain the street number of the person to whom they are sent, the postoffice authorities of Great Britain with their relatively circumscribed territory ought to be able to do the same, and particularly when the letters are addressed to well-known men.

It is a bad thing for postoffice officials as well as business men when they become so tied up with red tape that they cannot turn over the leaves of a city directory to find the address or to do anything which necessitates their stepping aside for a moment from some established and hard fast rule. The laws of the Medes and Persians are unalterable. So, too, appear to be the methods of the British postal service.

THE STEEL TRUST IN CANADA.

FOR some time representatives of the United States Steel Corporation have been in Canada, visiting the chief industrial centres with the view of securing information regarding the possibilities of the Canadian market.

While it is questionable whether the advent of the trust would be an advantage to Canada all persons intimate with industrial conditions will recognize the possibilities of works such as that organization would probably establish in this country.

In the first place the recent imposition of a duty of \$7 on steel rails is bound to prevent further importations of that product, while the anti-dumping clause is bound to embarrass importers of other steel products.

At the same time the construction of

NEXT WEEK'S ISSUE.

Next week's issue of **Hardware and Metal** will be of especial interest to **Plumbers and Steamfitters**. A copy of the issue will be sent to every plumber in Canada.

the Grand Trunk Pacific with steady extension of the Canadian Pacific and the Canadian Northern lines is bound to create a steady demand for rails and in conjunction with the exceptionally heavy immigration and general commercial activity, be the more or less direct cause of widespread industrial expansion.

Under such conditions it is but natural that such an important factor in the world's production of iron and steel should make a comprehensive study of the Canadian market.

THE QUESTION OF PURE WATER.

THE wet season in the Fall always seems a convenient time for the outbreak of epidemics, such as typhoid fever, and other diseases, the cause of which is directly attributable to the drinking of impure water. This

is one of the most pregnant sources of ill-health and one to which enough serious consideration is not often given by the average individual. The large downfall of rain at this season causes considerable surface drainage to find its way into wells and rivers, the source of our drinking-water supply. Water may appear to be perfectly clear and yet contain a large amount of germ life, and all discolored water holds in suspension a quantity of mineral, animal, or vegetable matter that is not at all conducive to the health of the person drinking it.

The hardware dealer has here a chance to make himself a public benefactor and extend his business at the same time. By impressing the people with the danger in this direction and by keeping before their minds the fact that it should not be lightly disregarded, he may make them think more seriously of the matter and provide themselves with proper water filters, which he should have in stock.

THE FOLLY OF CUTTING.

THERE is no practice in the hardware trade that is more impractical, more utterly useless than the practice of cutting prices on such lines as nails or glass. An illustration of this was cited to Hardware and Metal this week. It seems that during the past Summer a hardware dealer in an Ontario village has made it his habit to sell nails at \$2.25 flat, whether for 2-inch or for shingle nails. His excuse for such a practice was that he expected to "make good" on the sale of other lines to builders. His competitors, however, instead of meeting his ridiculous price on nails, kept below him on all other lines, with the result that his sales of nails were remarkable yet in few cases did he secure, with his nail sales, orders for other lines which are usually bought with them. The result has been that the retailer in point has discontinued his nail cutting practice.

Mr. J. O. McTaggart, recently with Miller, Morse & Co., Winnipeg, is starting a hardware and lumber business at St. Peters and Humboldt, Man.

PITTSBURG METAL MARKETS.

From the Iron Trade Review, Oct. 20, 1904.

ALL grades of pig iron advanced sharply during the week. The influences at work were heavy buying with bright prospects of a still greater buying movement in the next few days, the Southern iron situation, and the idleness of so many merchant stacks in the Mahoning and Shenango Valleys which are in no condition to blow in for some time owing to the repairs they are undergoing. To-day few of the furnaces are willing to make any quotations on Bessemer, although \$12.50 at the furnace is the minimum price at which it can be bought. Sales of close to 30,000 tons of Bessemer, foundry, basic and forge iron have been made in the last few days, and the inquiries that are out for Bessemer iron make the furnace operators hesitate about naming a price. The Lackawanna Steel Co. is in the market for Bessemer for delivery to the end of the year and will purchase 40,000 tons provided it can be secured at a reasonable figure. This tonnage was offered one operator at \$12 and was promptly turned down.

It is reported that the United States Steel Corporation is considering the purchase of a large amount of Bessemer iron, rumors putting the tonnage at 200,000 tons and upward. The corporation has idle furnaces and furnaces never yet started, but it is stated that the purpose of the purchase would be to clean up all the available Bessemer iron that would be offered in the open market until July next year, and that the benefit to the Corporation would come in the higher prices that could be obtained for steel products. The report is received with some doubt. It was further reported that six of the Corporation blast furnaces were blown out during the week, but this is denied, only two having gone off, one at Edgar Thompson and one at Lucy for repairs. Only a small tonnage of Bessemer, foundry and forge iron is available for delivery until the end of the year, the furnaces in the Valleys that are operating being all pretty well sold up, while the idle stacks are all undergoing repairs and the date of their operation is very uncertain.

The strength of the Southern market has of course had a bearing on the local situation. No. 2 foundry is now quoted at \$11, Birmingham, for delivery until the end of the year, and there are only a few stacks that have any iron to sell during this period. Eight small furnaces in that district have notified their local agents that they are out of the

market entirely until January, while the three leading interests declare that they will only consider offers for delivery during the first quarter of 1905. Pig iron production in the South is of course curtailed on account of the coal miners' strike, and if no terms are made between employers and strikers there is little likelihood of more than a gradual increase in coal production in the next few months. Out of a total of 19 merchant furnaces in the Mahoning and Shenango Valleys and contiguous territory nine are idle, and of this number seven are undergoing repairs and are being reconstructed. One of these seven stacks will probably blow in early in November. The idleness of the other two stacks is no doubt due to the low prices that have been prevailing, and it will take a still further advance to bring them into the situation as factors. Of the furnaces in operation, one will continue making Bessemer iron for the Republic Iron and Steel Co. until the end of the year, two are producing basic on contracts that practically take care of the entire output for almost three months, two are making iron for tunnel castings, while the remainder are shipping close to 7,000 tons a month on the Pittsburgh Steel Co. conversion contract. Very little foundry iron is being produced in this district for the open market, and the two Western Pennsylvania stacks in operation are both well sold up. There is little doubt that the market would quickly respond to any heavy purchase of Bessemer iron on the part of the United States Steel Corporation, as all conditions are favorable to further advances. The gradual resumption of idle stacks has to be considered, but the increase in production would be gradual.

This week an advance of one point on all sizes of pipe was announced amounting to \$2 per ton. This announcement was rather unexpected at this season of the year, but as pipe prices have been exceedingly low, and as skelp has grown much firmer in the last two weeks the advance is not without reason. Plate mills report an increase in tonnage, specifications from steel car works increasing after the heavy buying on the part of the railroads in the past six weeks. It is estimated that the four leading steel car works have contracts on their books for fully 20,000 cars, the two local works having four months' work ahead. Specifications on steel bars continue good from the agricultural implement manufacturers, though there is no heavy new buying at present.

Pig Iron—Sales of close to 30,000 tons of pig iron were made in this market during the week, one independent steel interest having picked up 15,000 tons of basic for delivery through the first quarter of next year at prices ranging from \$11.75 to \$12. These low prices, however, cannot be duplicated this week as the minimum on this grade for future delivery is \$12.50 at the furnace. The sales of forge iron to iron mills aggregate 10,000 tons at prices ranging from \$12.15 to \$12.25, Pittsburgh. We also note sales of nearly 4,000 tons of No. 2 foundry for delivery the first quarter of next year at \$13.35, Pittsburgh. The sale of 2,000 tons of Bessemer at \$12.25, furnace, is also reported for delivery to the end of the year, but the minimum on this grade at present is \$12.50, with conditions favorable to a still further advance.

Steel—Inquiries for steel are more numerous and a number of sales have been made at association figures. Independent mills are shading these prices somewhat. We make the following quotations: Bessemer and open-hearth billets, 4x4 in., and slabs, up to and including 0.25 carbon, \$19.50, f.o.b. mill, Pittsburgh, with actual freight added to point of delivery; 0.26 and including 0.60 carbon, \$1 advance; 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 4x4 in., \$2 advance; sheet and tin bars, \$2 advance. Bessemer and open-hearth rods are held at \$25 to \$25.50.

Pipes and Tubes—All kinds of pipe have been advanced one point this week, amounting to \$2 per ton. The advance at this season of the year was unexpected, but the advancing skelp market due to the increase in the price of raw material has made this slight advance necessary.

Wire and Wire Nails—Demand continues good, but is still below the normal for this season of the year. The heavy movement is nearly over, although mills are busy filling contracts that have been placed. Locally prices are being strictly maintained, although shading in the West continues. We make the following quotations: Wire nails, jobbers' carload lots, \$1.60, retailers' carloads, \$1.65, and less than carloads, \$1.75; painted barb wire, \$1.75 to jobbers in carloads; retailers' carloads \$1.80, and less than carloads, \$1.90, with 30c for galvanizing. Annealed smooth fence wire is held at \$1.45, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburgh, 60 days, with 2 per cent. discount for cash in ten days. Iron and steel cut nails are held at \$1.65 to \$1.70.

(Coke market on page 33.)

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Oct., 21, 1904.

Hardware.

BESIDES the usual brisk Fall trade there has been, within the past week, a wonderful spurt in business. As the days grow fewer in number in which the goods may go by boat for inland navigation, so the eagerness of the retail dealer to send in his stock completing orders increases. Western trade is hardly as brisk as last year, but in all a large volume of business is being done.

The last consignments of cement and firebrick are arriving and dealers in these say that favorable weather will mean a big business during the next few weeks. The nail situation is as before, with little prospect of an early change. Skates, lanterns, blankets, sleigh bells and shovels are having an unusual run. Prices remain unchanged throughout.

Carpet Sweepers—An unusually large trade is being done in carpet sweepers, prices of which we quote this week for the first time. Quotations are \$21 to \$30 a dozen.

Sewing Machines—Hand sewing machines are in extensive demand and complete machines with stand are moving well. We quote: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Food Choppers—Sales of these continue unabated. Our quotations are as follows: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Corn Cutters and Huskers—These have met with increased demand, many repeat orders coming in from the rural districts. Our quotations are as follows: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Agricultural Wrenches—A few of these are being sold, but the market is much less brisk than a short time ago. We quote: 6 in., \$2.85 a dozen; 8 in.,

\$3.15 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Skates—Since the opening of the season a few weeks ago, there has been an increasing demand and the season promises to be an unusually good one. Our quotations are as follows: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Lanterns—There is no scarcity of these as was expected and the demand continues very brisk. We quote, as before: Cold blast, \$7 a dozen; No. 0 Safety, \$4 a dozen.

Sleigh Bells—These have had a very active sale, although somewhat less than a week ago. Our quotations are: Brass team bells, rough, \$1.80 to \$4.50 a doz.; polished, \$2.10 to \$5 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—A heavy trade is being done in all lines of snow shovels at the present time. The demand being almost altogether from country trade. Our quotations are as follows: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Heavy Screw Hooks and Hinges—Merely a nominal trade being done and no degree of activity exists in these lines. Our quotations are as follows: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—There has been a large business lately in annealed wire, but within the past week it has fallen

off very considerably. We quote: \$2.25 per hundred lbs.

Barb Wire—Quietness prevails in barb wire at present and little or no stock is being sent out. We quote: \$2.75 per 100 lbs, f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Car lots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—In common with other lines of wire there is a marked dullness existing. Prices remain unchanged. We quote: in carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 and 8, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—Very few of these are being sold. We quote: \$2.65 per 100 lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—As mentioned last week the season's prices in these have been established and trade is not too brisk. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—There is still a slight scarcity existing in the supply of screws for immediate delivery. The demand continues good. Discounts are as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—Much more business is reported being done, in fact these lines are in a very satisfactory state. We quote: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter

and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; black bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—In spite of the anticipation on the part of manufacturers and some of the dealers that the wire nail market would become readjusted, there is no reason to consider that such a state of affairs will soon take place. A scarcity exists so that it is impossible to receive immediate shipments on any considerable quantity orders. We are not quoting prices this week as they are being sold at all prices.

Cut Nails—There is a fair demand for cut nails, of which the supply, as is the case of wire nails, is not very large. Considerable cutting is also being done in these, however. We quote, as before, \$2.30 per keg, f.o.b. Montreal, Toronto, Hamilton, St. John.

Horseshoes—The supply of these is good and stocks are in good shape. The market is very active. Our quotations are as follows: "P.B." new pattern, base price \$3.50 per 100 lbs; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—A very large trade is being done this week. We quote discounts on other brands, as well as trade brands that have already been quoted. Our quotations on list price are as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22s; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. "P. B." brand 55 and 57 1-2 per cent. off list; other brands 55 to 60 per cent. off list.

Shot Guns and Rifles—The Autumn-Summer weather enjoyed recently has occasioned still further increase in the demand for these lines. Prices remain the same and are to be had on application.

Ammunition—A shortage exists in

No. 16 gauge shells, but all other lines are well stocked. The season continues to be a good one. There is no change in price. We quote: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand.

Shot—All sizes are meeting with unusually large sales. We quote: Standard, \$6.50 per 100 lbs.; chilled, \$7 per 100 lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—Merely a fair amount of business in building paper is reported this week. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—The active season in this line is now over and dullness exists. The amount of business that is being done is not large. We quote as follows: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c, for 3 and 4-ply bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement and Firebrick—The last shipments of these for Canadian import are now being received. Stocks are in good condition. There is no special demand for firebrick at present, but cement is moving fairly well, and if the present weather continues a large volume of business is expected within the next fortnight. We quote: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—The market is weak and very little stock is moving. The new quotations of reduced prices still hold. We quote as follows: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3, one inch, \$2.95.

METALS.

The most striking feature of the metal market this week is the strength displayed by nearly all lines, with advancing prices, or immediate prospects of such. Ingot tin and pig lead are both higher, and an early advance is expected in tin plates, ingot copper, and zinc. There is a fair amount of both local and import pig iron moving, while large consignments of import stock are arriving daily. Steel is rather quiet, while Canada plates, black sheets, and tin plates are strong and active. In the scrap metal market there is not much being done. Copper is firm and in fair demand, while a small amount of scrap iron is being exported to Great Britain.

Pig Iron—Each week now sees very large consignments arriving from British ports by the incoming steamers. A fair amount of business is being done in both local and import stocks. Prices remain unchanged. We quote:

"Disc," No. 1.....\$17.50 delivered Montreal
"Dom.," No. 1.....18.50
Usual difference in price for lower grades.

Ferrona No. 1.....\$18.00 delivered Montreal.

" No. 2.....17.50 " "
" No. 3.....16.50 " "
" No. 4.....16.00 " "

Londonderry, \$18.50 to \$19.00 delivered Montreal.

Summerlee.....18.50 " "

Glengarnock.....20.00 " "

Garthsherie.....19.25 " "

Carnbroe.....18.50 " "

Carron No. 1.....19.00 delivered Montreal

" (special)17.50 " "

Ayresome No. 1.....17.50 " "

" No. 3.....16.90 " "

Clarence No. 1.....16.25 " "

" No. 3.....16.00 " "

No. 1 Cleveland....17.00 " "

Bar Iron—A scarcity in some sizes of bar iron is reported this week, which is generally the case at this season of the year, when the demand is excessive. We quote: Merchants' Bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2 net cash thirty days.

Tool Steel—Little activity exists in this line at present and there is no sign of a change in price. Our quotations are as follows: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jesop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c; Conqueror High Speed steel, 60c.

Merchant Steel—Little stock is moving, which has been the case for some time past. We quote as follows: Sleighshoe, \$1.77 1-2; tire, \$1.87 1-2; Spring, \$2.75; toe calk, \$2.37 1-2; machinery (iron finish), \$1.97 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.77 1-2; rivet, \$1.82 1-2. Net cash thirty days.

Cold Rolled Shafting—There is a good steady demand for this for the mills and

factories throughout the country. We quote: Cold rolled steel shafting 3-4 in. to 17-16, \$3.85 per hundred lbs.; inch and a half to 3 inch, \$3.50 per hundred lbs.

Canada Plates—A brisk and satisfactory market prevails. There is a strong upward tendency but no change is reported. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—These continue firm and in good demand. The market continues firmer and while concessions were obtainable earlier in the season, such is not the case at present. Our quotations are as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—There is a lively demand, particularly for roofing, in which a large amount of work is being done. Prices continue as before. Our quotations are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95. In less than case lots, 25c extra.

Sheet Zinc—While the market has advanced recently and the price quoted a week ago still holds, there is every indication of another and early advance, as the makers have advanced the price 15c per case. We quote as before: Case lots, \$6.35 to \$6.60, and small quantities \$6.60 to \$6.85.

Tin Plates—The sterling price for tin plates has advanced 3d per box and with higher price ruling for ingot tin an early advance in tin plates is expected. There is an active market at present and supplies are fairly good. We quote: Cokes, \$3.75, charcoal, \$4.

Ingot Tin—A further advance in price is noted this week. The market has been strong and advancing for some time with a fairly good demand. We quote new prices: 31 1-2 to 32c, the former being for quantities only and no concessions are obtainable.

Ingot Copper—There is a firm market which is fairly active. The advance noted last week still holds with further

indications of another increase. We quote: 14c to 14 1-2c per lb., the former price being for quantities only.

Ingot Zinc—Ingot zinc spelter continues strong with very little stock moving. The price remains unchanged. We quote: 53-4 to 6c.

Pig Lead—Last week an advance price was quoted in pig lead and this week a further advance has taken place. The market is still strong with an upward tendency, with a fair demand. We quote: \$3.35 to \$3.45.

Scrap Metal and Old Material—Any scrap metal moving at present is for British export. The copper market is firmer and a fair demand exists for scrap lead and scrap zinc. The demand for scrap copper and scrap brass is not great. A small amount of iron is moving, but very little is being consumed by home industry. There is no change whatever in prices. We quote as follows: Heavy copper and wire, 11 1-2 to 12c; light copper, 10 1-2 to 11c; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 1-2 to 8 1-2c; light brass 5 to 5 1-2c; lead, 2 1-4c; zinc, 23-4 to 3c; iron, No. 1 wrought, \$11; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs; old rubbers, 5 1-2c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Oct. 21, 1904.

Hardware.

GENERAL satisfaction is expressed by the wholesale trade with the volume of business doing at the moment and with the prospects for the Winter's trade. Though the interest in the elections has undoubtedly interfered with business in many parts of the country, there is fully as much being done now as usual at this season. An especially good trade in Fall lines of all kinds is reported. Window glass and stoves are attracting attention. The advance in prices in glass is well maintained and some predictions of a shortage before Spring are made. Some of the largest stove firms are already behind with their orders, one firm being over 4,000 stoves behind their orders. Wire nails, on the other hand are receiving attention on account of price cutting. There is no understanding among jobbers on wire nails and quite a range of prices is heard. However, \$2.25 would be about a fair market price, though that price is nominal.

Lawn Mowers—The trade are evi-

dently beginning to take an interest in this line. Prices for 1904 are as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discount 50 per cent. with freight concessions in quantity shipments.

Guns and Ammunition—There is still a good movement in anticipation of the deer hunting season.

Washing Machines—Our quotations are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Ecilpse, \$48; Dowsnell, \$36; New Century, \$72; Capital, \$42; Magic, \$25; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Chain—We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Clothes Reels—The Davis (W L. Co.), 40 per cent. off list.

Barb Wire—Orders for future delivery are being taken. We quote: \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—Some business is doing with prices steady as below: No. 5, \$3.45; Nos. 6, 7, and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Inquiries continue regarding prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—For some time cutting has been the order of the day and there is no set price to-day. A nominally fair quotation would be about \$2.25 per keg f.o.b. Toronto, with car loads at \$2.20.

Cut Nails—Despite the reduction in wire nails the quotations on this line are

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.

FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.

SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

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Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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MONTREAL, QUE.

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MIDLAND, ONT.

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We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

unchanged, with a fair business doing. We quote: \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are "C" brands, 40, 10 and 7 1-2 per cent.; "P.B." brands, 55 to 57 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—Business is improving at firm prices. We make the following quotations: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Prices have been confirmed. A good business is doing. We quote as follows: Iron rivets, 60 and 10 per cent. discount; iron burrs, 55 per cent.; copper rivets with usual proportion of burrs, 45 per cent.

Bolts and Nuts—Manufacturers are calling for an increased number of bolts and nuts. Prices show no change. We quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Woodenware—We quote: Tubs, No. 0, \$11.25; No. 1, \$9; No. 2, \$8; No. 3, \$7; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

Cordage—Business is being well booked up for rope and the jobbers are preparing for the binder twine trade for next season. Our quotations are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sashcord, "Hercules,"

Tinned Sheets Tinplates Canada Plates Polished Sheets

ETC., ETC.

FROM STOCK OR FOR IMPORT.

A. C. LESLIE & CO.

509-512 Merchants Bank Building.

MONTREAL.

COLD WEATHER IS COMING.

Have you got a line of good Pumps?
If not, you'd better write us about our

STANDARD ANTI-FREEZING PUMP

It's the best there is, and can't freeze if the valve is tripped by raising the handle. It's very simple, and the sale of one should bring you lots of other good business.

Catalog and prices for the asking.

The
R. McDougall Co.
Limited
Galt, Ont.



"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel
for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

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NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2c to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 63-4c; white, 11 to 13c.

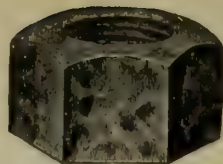
Cement—As a result of the good weather the demand has stiffened and prices have become firmer. At the beginning of the week a few cars were sold for less than \$1.70, but that state of conditions did not last and present indications point to a strong market during the rest of the season. During the week prices on Canadian and American Portland advanced from \$1.70 and \$1.90 to \$1.70 and \$2 per barrel. Since last quotations we have added to our list a new kind of imported cement, called "Keen's." This cement is imported from England and is used for marble work, and also in plastering. Quotations given by us on all cements are as follows: Canadian Portland, \$1.70 to \$2.00; English \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex store; American Portland, \$1.70 to \$2.00 f.o.b. Toronto.

Firebrick—Trade conditions on this market are fair with an inclination to become brisker. Prices remain the same, the outlook, however, is for a change as soon as navigation closes, which will be about November 15. Quotations are as follows: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Building Paper—Reports still continue to arrive stating that business done this year is far in advance of that of former years. As a result of the favorable weather to the building trade the demand is of first class order. Prices are unchanged. Our quotations are: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slater's felt, 60c per roll.

METALS.

The advance in pig iron in the United States, while not yet influencing prices on this market is just what has been needed to give strength and stability to the market here. For some time pig iron, bar iron and steel have been strengthening on the local market and as the consumption has been absorbing practically all the production the situa-



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.

SAMSON CANNON BALL PLYERS

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SMITH & HEMENWAY CO.

Mfrs. Cutlery and Hardware Specialties.

294 BROADWAY, NEW YORK CITY.

Canadian Sample Rooms, 215 Coristine Bldg., Montreal, Canada.

UTICA DROP FORGE & TOOL CO.

Mfrs. of Nippers and Pliers.

ALLEN C. JENKING, Canadian Manager.

Side Cutting Pliers. For cutting heavy wires and cables. 3/4 inch circular throat. Made of finest British steel.

Send for Plier section of the Green Book of Hardware Specialties.

GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, MONTREAL

Brand Galvanized Sheets

are all carefully selected. They are soft, smooth and well galvanized. Price lower than for other high grade brands.

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.

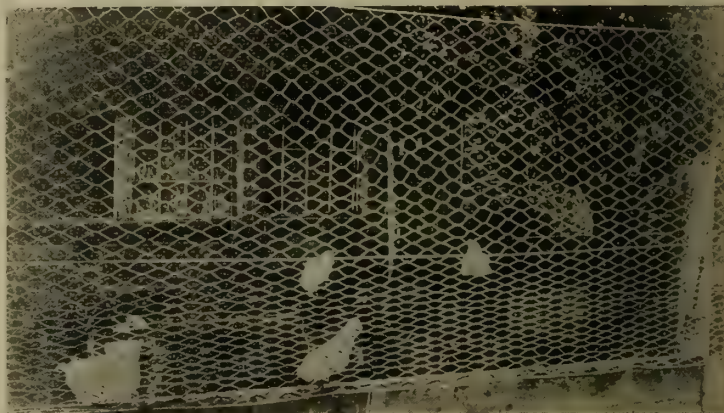
Page "Acme" Poultry Netting

This is the only netting that can be erected without puckers, bags or wrinkles in it. The selvage wires being of straight smooth wire, the web can be adjusted smoothly and evenly along the edge and centre wires.

Notice that this netting has a large wire running through the centre (except in the 24-inch) which adds much strength to the web and enables it to hold its shape.

With Acme netting no boards at the top are necessary, and posts can be placed long distances apart.

The netting is very close at the bottom, the meshes being only 1 1/4 inch; at the top they are 3 inch. This makes it as effective as netting of 1 1/4-inch mesh throughout, and the cost is much less.



THE PAGE WIRE FENCE CO., Limited

WALKERVILLE

MONTREAL

ST. JOHN

tion is now a firm one. On other lines there is little change, though the tendency is still upwards on ingot metals.

Pig Iron—Foundries throughout Ontario are about as busy as they have been for many years. Consequently the consumption of iron is large. There has been a general advance on the Pittsburg market, so the local market is now stiff. We quote as follows:

Middleboro, f.o.b., Toronto.....	\$18 70
Hamilton, No. 1	\$17 50 to 18 00
" No. 2	17 00 to 17 20
" No. 1, Hamilton	16 25 to 16 55
Midland, No. 1	17 00 to 18 00
" No. 2	17 00 to 17 25
" No. 1 f.o.b. Midland.....	16 25 to 16 75
Radnor, f.o.b. furnaces.....	27 50
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—The upward movement continues and prices are firm as below: \$1.80 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per

100 lbs.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—The consumption seems to be increasing. Prices are firm. We quote: "M" self-hardening, 50c; "Alpha" high speed, 65c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10 to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—The British market continues to strengthen. Locally there is no change from 30 to 31c, being the general quotation.

Galvanized Sheets—A steady trade keeps up at unchanged prices. We quote as follows: Queen's Head, \$4.00 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.00 for 28 gauge; Gordon Crown, \$4 for 28 gauge.

Tin Plates—An excellent demand continues, with prices steady. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.40; half-polished, \$2.50; and all-bright, \$3.30.

Copper—An advance of 1-4c per lb. is reported, the rise being due to higher level of values in the larger markets. We quote in ton lots as follows: Ingot copper, \$13.50 to \$13.75; and sheet copper \$20 per 100 lbs.

Brass—This market is more active this week. Discounts are steady at 15 per cent.

Lead—A steady trade continues. We quote: \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—There has been a falling off in demand during the week. Prices are from 53-4 to 6c per lb.

Solder—This market has picked up and is active. We quote: Guaranteed half-and-half at 171-2 to 18c, and wiping, 161-2 to 17c.

Old Material—As high as \$5.60 has been paid on one or two occasions during the week for old rubbers, under date of writing, however, the price has declined to its original figure. Reports state that the principal factories are well supplied and owing to this fact another decline is expected in the price. A better inquiry is made by the consumers for machinery cast scrap and present indi-

cations anticipate a slight advancement in the price. During the week the market has brightened up generally speaking and dealers are looking forward for an advancement of the conditions of the present market. Practically speaking prices remain the same. Quotations are: Heavy copper and wire, 103-4c per lb; light copper, 93-4c per lb; heavy red brass, 91-4c per lb; heavy yellow brass, 7 to 71-2c lb; light brass, 5 to 51-2c per pound; tea lead, \$2.20 per 100 lbs; heavy lead, \$2.40 to \$2.50 per 100 lbs; scrap zinc, 31-2c per lb; iron, No. 1 wrought, \$7 to \$9; No. 2 wrought, \$2; machinery cast scrap, \$10 to \$12; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 51-2c per lb; country mixed rags, 65c per 100 lbs.

PETROLEUM.

The demand for home consumption is at present very good, while the export demand is fair and steady. Conditions of local trade are, practically speaking, unchanged. Prices remain the same. We quote the following prices: Refined Canadian water white, 18c; Canadian prime white, 161-2c; American water white, 181-2c ex warehouse; crude, Pennsylvania, \$1.56; North Lima, \$1.05; South Lima, \$1; Canadian, \$1.53.

Hides, Tallow, Skins and Wool.

Up to date reports state a strong market with the exception of tallow which is weakening. Prices on the Chicago market have dropped and although there is no material change here, indications point to a slight decline in the near future. Shearlings have been removed from the list until next season. Prices are unchanged and the general outlook is improved over last week. We quote the following prices:

HIDES

No. 1 green steers, per lb.	0 09
" 2 " " "	0 08
No. 1 green, per lb.	0 08 1/2
" 2 " " "	0 07 1/2

CALFSKINS.

Veal skins, No. 1, 6 to 14 lb. inclusive	0 10
" " " 2 " " "	0 08
" " " 1 15 to 20 lb " "	0 09
" " " 2 " " "	0 07
Lamb skins	0 80

LONDON METAL MARKET.

From the Metal Market Report, October 20, 1904.

Pig Iron—Scotch warrants, Glasgow, closed at £50 4s, a reduction of 2s; Middleboro, No. 3 foundry, at £43 71-2s, a decline of 11-2s in the week.

Tin—Spot tin opened weak at £131 7s 6d; futures at £130 2s 6d, and after sales of 250 tons of spot and 350 tons of futures closed strong at £132 for spot



For either new or old Buildings

OUR

Metallic Cornices

can't be equalled for practical service and artistic beauty.

They are light in weight, easily handled and economical in cost—giving fire-proof protection as well as a handsome effect.

Almost countless stock designs—or any particular size, shape or pattern to order. Write for full details.

METALLIC ROOFING CO., LIMITED

Wholesale Mfrs.

TORONTO, CANADA.

and £130 10s for futures, making an advance of £2 7s 6d on spot and 10s in futures.

Copper—Spot copper opened easy at £60 2s 6d, futures at £60 6s 3d, and after sales of 150 tons of spot and 250 tons of futures closed easy at £60 1s 3d for spot and £60 5s for futures, making price as compared with a week ago 3s 6d higher on spot and 2s 6d higher on futures.

Lead—The market closed at £12 5s, making an advance of 2s 6d in the week.

Spelter—The market closed at £23 2s 6d, an advance of 7s 6d in the week.

Pittsburg Coke Market.

Coke—A number of furnace interests are already inquiring for prices on coke for the first half of next year. In view of the advance in pig metal the operators are not anxious to quote, although \$1.50 and \$1.60 has been named by different operators. Low water has already interfered with coking operations at a number of plants in the Connellsville region, and it is probable that a number of plants will be compelled to shut down completely unless the supply improves. For prompt shipment foundry coke is held at \$1.75 to \$1.85 at the ovens, although few operators are willing to consider this price for shipment during the first half of next year. During the week ending Oct. 8, the output of the upper region amounted to 218,000 tons, while the lower region produced 62,078 tons. In the two regions less than 6,000 ovens are idle.

WRITE FOR PRICES AND DETAILS

Merrick, Anderson & Co.

NORTHWEST DISTRIBUTORS

WINNIPEG.

"Hot Blast" Line for Coal.

For Soft, Hard or Lignite Coal, Coke, Etc.

Made by the D. Moore Company,
of Hamilton.

STRATHCONA HOT BLAST

KNOWN EVERYWHERE.

MANITOBA DEPOT

Merrick, Anderson & Co.
117 Bannatyne St. East, - Winnipeg.

STRATHCONA DOUBLE HEATER

No.	Diameter of Body.	Approximate Shipping Weight.
1115	15 inches.	134 pounds.
1118	18 "	174 "

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL

Room 515 McIntyre Block,

Winnipeg, Oct. 17, 1904.

THE threshing of the Manitoba wheat crop is now progressing very rapidly and is reported by the C. N. Railway to be more than half over, and a week or ten days will complete the harvesting operations for the year 1904, providing the weather continues fine. Throughout Manitoba and the Northwest for the past few weeks the weather has been very unfavorable in spots, but for the past week threshing has continued without interruption and remarkable headway is now being made. The yield along the line will range from 15 to 30 bushels per acre, on a whole it will average up about 20 bushels to the acre. Mr. F. W. Thompson, vice-president of the Ogilvie Milling Co., after an extensive trip through the west reported that he was well satisfied that the wheat crop of Manitoba and the Territories would this year be approximately 65,000,000 bushels.

A view of the ruins of the J. H. Ashdown Co.'s retail store destroyed by fire last week is herewith given. Mr. Ashdown has returned from St. Louis, where he was at the time of the fire and already plans are under way for resuming the retail business. The Kemp Mfg. Co.'s building on McDermott avenue, has been secured as temporary quarters but the firm have not yet announced their intention about rebuilding. It is likely, however, that they will put up a store better in every way than the last one.

The Northwest Machinery and Iron Co., Limited, have now opened up a branch office in the McIntyre block, room 511, in order to facilitate the handling of their down town business.

The market holds strong and bright with little or no changes in the price list of any note. We quote:

Barbed wire, 100 lb.....	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91
Annealed wires (uncoiled) 100c. less.	

Horseshoes, iron, No. 0 to No 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 20
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Horsenails, No. 4—1½ in., list price.....	0 48
" " 5—2 " ".....	0 32
" " 6—2½ " ".....	0 28
" " 7—2½ " ".....	0 24
" " 8—2¾ " ".....	0 22
" " 9—2½ " ".....	0 20
" " 10—2½ " ".....	0 20
" " 11—2½ " ".....	0 20
" " 12—2½ " ".....	0 20
" " 14—3½ " ".....	0 20

Discount on these prices 40, 10, 7½ per cent., plus 15c. per box.

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in.....4 10	1½ in.....4 10
3d 1¼ in.....3 75	1¾ ".....3 70
4d 1½ in.....3 50	1½ ".....3 50
5d 1½ in.....3 50	1¾ ".....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2½ in.....3 25	2½ ".....3 25
10d 3 in.....3 20	3 ".....3 20
20d 4 in.....3 15	3½ ".....3 15
30d 4½ in.....3 10	4 ".....3 10
40d 5 in.....3 10	4½ ".....3 10
50d 5½ in.....3 10	5 ".....3 10
60d 6 in.....3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100lb.....	8 50
Jessop.....	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10
Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	
Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28.....	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	
Genuine Russian, per lb.....	11
Imitation ".....07 to 08	
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05
Tinplate, 1C charcoal, 20 x 28, box....	9 50
" IX.....	11 50
" IXX.....	13 50
Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50
Pig lead, 100 lb.....	5 00
Black iron pipe, ¾ inch.....	
" ¾ ".....	2 80
" ¾ ".....	3 25
Black iron pipe, ¾ inch.....	4 25
" 1 ".....	5 80
" 1½ ".....	8 20
" 1½ ".....	10 00
" 2 ".....	14 00
Rope, sisal, 7-16 and larger, basis.....	10 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrum.....	11 25
Solder.....	20
Axes, chopping.....\$ 6 75 to 12 00	
" double bitts.....12 00 to 18 00	
Bluestone.....	5 25
Screws, flat head, iron, bright.....85 and 10 p.c.	
Round " ".....80 p.c.	
Flat " brass.....75 and 10 p.c.	
Round " ".....70 and 10 p.c.	
Coach.....	70 p.c.

Bolts, carriage, 3/4 or smaller.....	60 and 5 p.c.
" " 7-16 and up	55 p.c.
Bolts, machine, 3/4 and under.....	55 and 5 p.c.
" " 7-16 and over.....	55 p.c.
Bolts, tire	60 and 5 p.c.
Bolt ends	55 and 5 p.c.
Sleigh shoe bolts	70 p.c.
Machine screws	70 p.c.
Plough bolts	55 and 5 p.c.
Square nuts, case lots.....	3c. discount.
" " small lots.....	2 1/2 c.
Hex " case lots.....	3c.
" " smaller lots.....	2 1/2 c.
Rivets, iron.....	50 and 10 p.c.
Copper, No. 8.....	32
" No. 12.....	36
Coil chain, 3-16 inch.....	9 1/2
" " 1/4 inch.....	7 1/2
" " 5-16 inch.....	5 1/2
" " 3/4 inch.....	5 1/2
" " 7-16 inch.....	4 1/2
" " 1/2 inch.....	4 1/2
" " 3/4 and 1/2 inch.....	4
Spades and shovels.....	40 and 5 p.c.
Harvest tools.....	60 p.c.
Axe handles, turned, s. g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60
Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.



Ruins of the J. H. Ashdown Co.'s Retail Store.

Building paper:	
Anchor, plain	65c.
" " tarred.....	70c.
Pure fibre, plain	67 1/2 c.
" " tarred.....	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" " military.....	15 p.c.
American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
" chilled, 12 gauge.....	16 00
" soft, 10 gauge.....	18 00
" chilled, 10 gauge.....	19 00
Shot, Ordinary, per 100 lb.....	6 00
" Chilled.....	6 55
Powder, F.F., keg.....	4 70
" F.F.G.....	5 00
Tinware, pressed, retinned,	70 and 10 p.c.
" " plain.....	75 and 2 1/2 p.c.
" " pieced.....	
Japanned ware	37 1/2 p.c.
Enamelled ware, white.....	45 p.c.
" " Famous.....	50 and 10 p.c.
" " Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American	27 1/2 c.
Prime white American.....	25 1/2 c.
Water white Canadian.....	25 1/2 c.
Prime white Canadian.....	24 1/2 c.

SCRAP.

No. 1 cast iron.....	\$14 to 15
No. 2 ".....	7
Wrought iron scrap.....	5
Copper (heavy).....	8 1/2 c. per lb.
Yellow brass (heavy).....	7 1/2 c.
Light brass.....	5c. to 6c.
Lead pipe, or tea lead.....	2c. to 2 1/2 c.
Zinc scrap.....	1c.

PAINTS, OILS AND GLASS.

White lead.....	\$5 00 to \$5 50
Putty in bladder, 2 1/2 lb., in keg of 100 lbs.	0 02 1/2
Turpentine, pure, in barrels.....	\$ 0 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
Boiled.....	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.75; 26 to 40, \$4.00; 41 to 50, \$4.50; 51 to 60, \$5.00; 61 to 70, \$5.50, in 100-ft. boxes.	
Lubricating oils, heavy castor machine.....	0 29
" " extra engine.....	0 27
" " dynamo.....	0 35
" " black.....	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	
Harness oil.....	0 50 to 0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00 1/2
" " 2nd pressure.....	1 09 1/2

There is a constantly developing field in the Atlin mining district for the manufacture of mining machinery. The Western Engineering Works, of San Francisco, have the contract for building the new dredge of the British American Co., which will cost \$100,000, but the camp is now in that stage when improved machinery must be installed. His Honor Judge Henderson, who has been holding county court sittings there for two months past, has returned, and says the district is a permanent one, and that the introduction of the latest methods will give good outputs for many years to come.

Already it has been decided to put in steam shovels, a new thing in the district. One will be installed on Spruce Creek, and Mr. R. D. Featherstonhaugh is contemplating another. The first will be operated by the Amalgamated McKee Creek Mining Co., composed of New York capitalists, and of which Mr. C. M. Hamshaw is managing director. This company and the McKee Creek Consolidated Mining Co., practically composed of the same people, have consolidated, and since they acquired the interests of the Nimrod Syndicate, an English concern, they now control all the hydraulic claims on McKee. The capital will be over \$2,000,000, and operations on a much larger scale will be carried on next Summer.

• • •

The Riblet Tramway Company is an American concern, with headquarters in Spokane, that is doing a very large business in this province. The firm is composed of B. C. Riblet, president; R. N. Riblet, vice-president; W. S. Riblet, secretary, and they have been in business for five or six years. They have constructed trams for mines in all the Western States, and have enjoyed a monopoly of the business in British Columbia. At present the company is engaged in building an aerial tram for the Britannia mines, near Vancouver, a contract which will cost \$73,000. Another has been started for Sullivan Group Mining Co. in East Kootenay, for a tram 6,000 feet long with a capacity of 500 tons of ore per day. One or two trams were destroyed this Summer by fire in the timber, and the Riblets have also secured the contracts to rebuild these. It is a very profitable business, and as this company gives satisfaction it comes in for most of the orders.

• • •

Captain Balcom, of Nanaimo was in Vancouver this week en route to Sweden

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special Correspondence of HARDWARE AND METAL.

Vancouver, B.C., Oct. 14 1904.

LARGE consignments of agricultural machinery were on board the steamer Aorangi when she departed this afternoon for Australia. Harvesting begins in the southern continent in December, and these shipments will arrive in time for this year's crop. The machinery was all from eastern manufacturers, some being from the United States. Since the seven years' drought is over, and there is every indication of the next few years being "fat ones," to use Joseph's words, there will be a good market in the Antipodes for machinery used in the harvest field. With preferential tariff Canadian manufacturers should come in for a large portion of this trade.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion. Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
" " 6 months.....	10 00
25 " " 1 year.....	10 00

SITUATIONS VACANT.

WANTED—Man well posted on paints, brushes and ammunition for Western Canada, to take charge of these lines for jobbing firm. Good opening for a hustler. Apply Box 174, **HARDWARE AND METAL**, Toronto. (42)

WANTED—Position in good retail hardware, by young man with two years experience in wholesale. Best references. Box 177, **HARDWARE AND METAL**, Toronto. (42)

BUSINESS CHANCES.

HARDWARE BUSINESS—In South Florida; yielding handsome profits; on reasonable terms; delightful climate all year round; for terms and particulars apply to Edward Trout, Mail Building, Toronto. (43)

SITUATION WANTED.

YOUNG man of business ability wants experience as salesman in retail store; understands books. Ontario or Northwest. Box 192, **HARDWARE AND METAL**, Toronto. (41)

WANTED.

WANTED—Customers wanted by J. Albert Schmidt, Solingen, Germany, for his knives, and scissors, also for household specialties which also sell to hotels, restaurants, hospitals, etc. Self acting cooks, potato-peeling and washing machines, clothes wringers, folding ladders, cask stands, dish-cleaning machines, etc. (44)

FOR SALE.

FOR SALE—Good paying tinshop; good dairy trade; large eavetrough business; everything complete for the work; stock, tools, horse, rigs, cheap. R. B. Scriven, Otterville, Ont. (48)

THE BANNER ALWAYS LEADS.



Brilliant
Light.
Wind
Proof.

For sale by all
prominent
jobbers
throughout
the
Dominion.

Manufactured
by the

Ontario Lantern & Lamp Co.
Hamilton, Ont. Limited

to secure a suitable whaling schooner wherewith to carry on the business of the company he has lately formed, the stock of which is owned by people in Victoria. Whaling on this coast has up to the present been carried on exclusively by San Francisco ships though whales are constantly seen in the neighborhood of Vancouver Island, and in the Gulf of Georgia, outside Vancouver harbor. Captain Balcom's company is now erecting suitable buildings at Barkley Sound, on the west coast of the island, to treat the product of the catches. There are good opportunities for whaling in the north Pacific and the company should prosper.

* * *

The B. C. Mills Timber and Trading Company, of Vancouver, was awarded the first gold medal ever struck by the Royal Agricultural and Industrial Society, which holds the annual provincial fair at New Westminster, for its display of "ready-made" houses.

The new cradle of the Victoria Machinery Depot is to be tested this week by putting in the Crown of Germany, a vessel of 3,500 tons. A Boston firm installed the machinery.

The Copper King mine of White Horse has begun shipments of ore to the smelter at Crofton. It is expected that 1,000 tons will be shipped before the first of the year.

The C.P.R. is making a deal for the purchase of the Cascade Power Company's holdings at Cascade, near Grand Forks, and will install a customs smelter. This is what has been looked for since Jim Hill secured control of the stock of the Granby smelter, and of course will take all the tonnage himself.

The new Flathead country in remote southeastern Kootenay is to have a railway, and it is stated it will be continued south to Butte, to give a market for the coal to be mined in the new district.

Extensive and handsome offices are to be erected in Victoria by the C.P.R. The plans are now being prepared and the work will be completed first thing in the Spring.

Work on the new post office in Vancouver, which will ultimately cost \$350,000, is being started to-day.

Though the wholesale prices of nails are a little lower, there is no difference in the retail. In other staple lines there is no change.

Nearly all the exhibits of patent fire fighting appliances shown to the delegates of the Pacific Coast Fire Chiefs Association, which is holding its annual convention in Vancouver this week, are of American manufacture.

Pennsylvania anthracite, brought around in ships during the Summer is ousting other semi-hard coals. The eastern product, than which there is none better retails at \$12 per ton, while previously the price was \$17 and \$20. The anthracite mined at Banff is worth \$11.50 here, and the semi-anthracite from Comox \$8.50. In the former instance the coal is mined by the C.P.R. and brought in the cars hitherto carried empty, and in the latter transportation is by water. People have asked and have never yet learned why prices should be so high.

The Canadian Timber and Sawmills, Limited, which had the big mill at Trout Lake City, which was seized by the sheriff, has been re-organized, and its troubles straightened out. The head offices will be at Revelstoke, and Mr. W. Cowan will be manager.

The statement of Mr. Robert Kerr, passenger traffic manager of the C.P.R., who was recently on a trip to the Pacific coast, that the lumber industry is flourishing, is creating much comment among lumbermen generally. It was pointed out to Mr. Kerr while in the west that depression exists from the eastern boundary of the province to the Pacific coast among the lumber mills, owing to the 12,000,000 and 15,000,000 feet per month imported from the State of Washington, and rendered possible by the absence of a duty.

THEIR SALES INCREASING.

Mr. T. Christie, representing the Ontario Lime Association, of Toronto, reports that better and larger orders are being received for "Keen's" cement. This is an imported cement brought in from England and used for marble work, and for plastering purposes. It has been on the Canadian market for about five years, but up to a short time ago was not used to a very great extent. Lately, however, more attention has been paid towards spreading the name of this cement throughout the country, with the result that contractors and builders are using it largely for pillar and wall work and in such buildings as hotels, banks and public buildings.

PERSONAL MENTION.

Mr. John M. Taylor, of the Taylor-Forbes Co., Limited, Guelph, Ont., was in Toronto on Thursday.

Mr. J. A. E. Bureau, formerly connected with the Canada Hardware Company, of Montreal, is now in the service of Lewis Bros. & Co.

Mr. E. J. Lyne, late of Stewart & Wood, has opened up an office at 33 Richmond street east, Toronto. Mr. Lyne is agent for goods manufactured by E. T. Wright & Co., Hamilton, and the Western Foundry Co., of Wingham.

Much sympathy is expressed for Mr. W. H. C. Mussen, machinery dealer of Victoria square, Montreal, in the death of his father, Mr. W. Mussen, which occurred very suddenly after undergoing an operation in one of the city hospitals.

Mr. J. A. Cochrane, who for the past three years has been the manager of J. R. Booth's branch store at Madawaska, Ont., has accepted a position with Frothingham & Workman, wholesale hardware dealers, Montreal, to represent them in the Ottawa district.

Mr. J. T. Seybold, senior member of the wholesale hardware firm of Seybold & Sons, Montreal, is at present confined in the Royal Victoria Hospital with appendicitis. His condition is not serious and we are pleased to note that he is improving somewhat.

Among the visitors to Montreal recently, were Mr. L. G. McQuade, senior member of the firm of McQuade & Son, Victoria, B.C., and Mr. W. J. Pendray, proprietor of the British American Paint Co. of the same place. Mr. McQuade, who was accompanied by Mrs. McQuade and his daughter, spent some time visiting the various factories and points of interest in Montreal. They left for Albany, New York, Buffalo and Toronto, en route to St. Louis on their way home. Mr. McQuade has long been a subscriber to Hardware and Metal, and remarked that he appreciated the paper very much. He considered Victoria as important a place as Vancouver, as far as western development was concerned, since Victoria had come to the front and was determined to maintain its lead as a wholesale distributing centre. Mr. Pendray incidentally remarked that he was peculiarly struck with the rapid growth of Montreal since his last visit some years ago. The new Bank of Montreal Building, Board of Trade, Commercial Travelers' Rooms, and

the lofty elevators were all a revelation to him. He thought it would be hard to beat the Parliament buildings at Victoria for their design, and the beauty of the Bird Cage Walk, Oak Bay, the Gorge and other sights in which Victorians delight in showing their visitors.

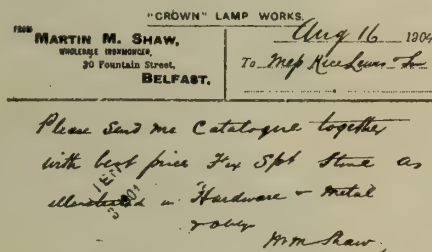
INQUIRIES FROM GREAT BRITAIN.

It is beyond question that the commercial ties which bind Canada close to Great Britain are steadily strengthening. Since the preference was given by Canada to British goods there has been a continuous expansion of trade between the Mother Country and the Dominion.

The interest taken by British business men in Canada is probably greater at the moment than has ever before been the case. This is manifested in the reports of Canadian commercial agents. It has, too, been manifested to Hardware and Metal by the many subscriptions from British houses that have come to hand in recent years.

We are glad to note that this latter development has been followed by inquiries from our British readers relating to advertisements in the paper.

Below is published in fac simile a postal card received by Rice Lewis & Son, wholesale hardware merchants, Toronto, from a subscriber in Belfast, Ireland:



We are also able to give this week an inquiry received by Lewis Bros. & Co., wholesale hardware dealers, Montreal, from a reader in Liverpool. We reproduce the letter below:

14 and 16 Highfield Street,
Liverpool, Eng.
September 19, 1904.

MESSRS. LEWIS BROS. & CO.

DEAR SIRs—Will you kindly send me, to the above address, one of your gun catalogues No. 35, as per your advertisement in HARDWARE AND METAL AND CANADIAN MACHINIST.

Yours truly,
JOHN A. NICHOLLS.

Every effort is being made by the publishers of Hardware and Metal to extend its foreign circulation, realizing that all advertisers are bound to benefit more or less by such extension.

CONDITIONS AT PRESENT IN SOUTH AFRICA.

Mr. C. S. Rubin, formerly of Montreal, but now of Port Elizabeth, writes as follows of conditions in South Africa:

"There can be no gainsaying the fact that the wave of depression which has got South Africa in its grip is causing a serious amount of destitution all over the country. In all parts of the sub-continent this is the case, but, perhaps, Cape Town and Johannesburg are feeling the pinch even more acutely than other parts of the country. Unfortunately people at home will still persist in believing that they have only to come to South Africa and their fortunes are made. They will not believe that this country is still overshadowed with heavy clouds of depression. They, therefore, continue to flock to South Africa, which they foolishly believe is like Palestine of old, a land flowing with milk and honey, and in the end these newcomers help to swell the ranks of the unemployed. Cape Town is their port of disembarkation, but they invariably make their way to Johannesburg—the Golden City which draws them to it like a magnet. Some, however, get no further than Cape Town, and so those two places suffer the most from this influx of population."

BUILDING PERMITS.

MONTREAL.

O. Gervais, Labelle street, two houses, \$2,700.

J. Larose, Mount Royal avenue, one house, \$1,500.

James Kennedy, Bourgeois street, one house, \$3,000.

J. B. Desrochers, Dorion street, one house, \$2,500.

L. A. Lavaltre, La Salle street, three houses, \$4,500.

Estate L. Prevost, St. Andre, two houses, \$7,500.

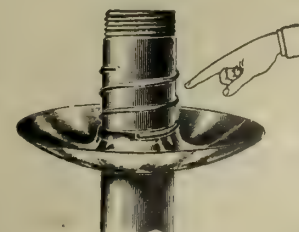
E. Benoit & Co., Notre Dame street, two houses, \$7,500.

L. P. Dupre, Ridard and Mount Royal avenue, one house, \$6,000.

THE HOLDFAST CEILING and FLOOR PLATE

(Patent Pending)

Easily Adjusted
No Set Screw



Not affected by
Expansion or Contraction

Manufactured only by Write for Samples and Discounts.
THE FAIRGRIEVE MFG. CO., Toronto, Can.
Phone Main 2993.

Window and Interior Displays

Timely Hints
and Suggestions

Lighting the Window.

THE merchant who lives in a town where electric lighting is available should not hesitate to make use of it. Both in the store interior and in the window there is no light so suitable as that given by electricity, whether incandescent or arc. There are other lights that throw a whiter light than the average incandescent, but, as chromatic effects are of little importance to a hardware display, the incandescent is far above all others.

Electricity is cleaner, gives less trouble, is easier to keep in order and is safer than any other. It does not vitiate the air, is more convenient for lighting and extinguishing, and is odorless. In a window no other light is as satisfactory, principally because the heat generated is so small that it can be placed close against any wood or glass without danger. This is the only position for window lights. An enclosed window with any other light would soon be filled with foul air and the illumination with an elaborate display rendered unsatisfactory.

Incandescent lights should be out of sight and placed near the top of a window in the front so that the light will be thrown on the side of the goods seen from the street. As a rule the lights are placed at the top close above the glass, in a trough reflector. If a sufficient number of lights cannot be used, the position could be altered to lower down on the glass, the lights being hidden by a sign across the front. Where lights are few, single cone-shaped reflectors are best. The key for these lights should be at the entrance to the window.

There is a possibility of having too much light, making a hard glare, which is very disagreeable to the average eye. Some use frosted globes on window lights to soften the effect, but, unless too many lights are used, there is nothing gained by this. A few have found an added attraction in placing lights down the sides of the window frame; such lights should always be frosted. Colored lights are of use in a general store only in special displays, and then at rare intervals. Bulbs of colored glass can be kept for this purpose and screwed on when desired. The same or a better effect can be produced by the

use of adjustable colored paper shades, a novelty particularly suitable for the Christmas season.

Where electricity is not obtainable acetylene, gas, gasoline or coal oil are the lighting agencies. Whatever provides the light, the fixtures should be as inconspicuous as possible, and the odors always considered. Expense in any form is an important factor, and it is on this account that electricity is often passed over.

eggs and gravel on the beach. On the pond itself is a decoy duck and small boat. Small fish were swimming around in the water. The background is a display of shotguns, while on either ends are placed shot, powder and loaded shells.

The arrangement was simple and inexpensive and yet had a good effect and was an excellent advertisement.



A Window Display that Interested Hunters.

THIS WEEK'S ILLUSTRATION.

THIS display of guns was arranged by A. J. McPherson & Son, Dauphin, Man. In the front is a miniature lake made by filling with water a galvanized iron basin about 30 inches in diameter and 3 1/2 inches high. On two sides representing the shore are placed green bullrushes, seaweed and

Mashinter & Co., Toronto, have the contracts for plumbing and heating in the new factory for the Pure Gold Mfg. Co., College street; for plumbing and hot water heating in a house for J. H. Moss, Poplar Plains road, Toronto.

Mr. Walter Gore, of Montreal, was out of town this week on a business trip to New York and Hamilton.

Technical Book Reviews

Readers of **HARDWARE AND METAL** can secure any of the books referred to below at publishers' prices by writing to Book Department, **HARDWARE AND METAL**, Toronto.

Manufacturing Cost. By H. L. Hall, published by the Bookkeeper Publishing Co., Detroit, Mich.; price \$3.

This work deals with the subject of manufacturing cost along general lines; it deals with principles but does not touch on concrete cases. In this it differs very materially from the general run of books dealing with this subject, the usual custom being to describe for the most part cost systems used by more or less successful manufacturers. Thus they describe a cost system used in a certain particular iron-working machinery plant, and doing this they have limitations as regards readers. However this volume may be perused to advantage by any manufacturer or person interested in industrial pursuits, since fundamental principles are discussed. The conclusions drawn are the result of the author's experience, and his object in writing the work was to make suggestions which might throw additional light on the subject for the reader. To those making a study of the subject the book should prove of no small value, many valuable hints and suggestions being contained within its pages.

* * *

Boiler Construction. By F. B. Kleinhans; first edition, 1904; a practical explanation of the best modern methods of boiler construction from the laying out of the sheets to the completed boiler; published by the Derry-Collard Co., New York.

This work is intended for the boiler-maker, and contains practical rather than theoretical matter. The methods described are methods that have been tried and approved by large builders. The size of the volume would not admit of the illustrating and describing of separate methods used for the construction of boilers for various classes of work, and, therefore, a representative method, that of building the locomotive boiler, is discussed. The locomotive boiler is taken because it better represents the general class of boilers than any other. The first section of the work is devoted to the consideration of various types of boilers. Then begins the description of the practical construction of the locomotive boiler, including chap-

ters on the laying out of sheets, several methods of developing the slope sheet, shearing, that is the preparation of the sheet for the flanging operation; also bending, assembling, calking, and boiler details. This section is followed by sections on the misuse of machines in the boiler-room, testing of boilers, and a description of tables.

* * *

Bevel Gear Tables. A collection of tables and necessary explanation to enable anyone to figure bevel gears without the use of trigonometry; by D. A. Engstrom; first edition; published by the Derry-Collard Co., New York.

This work is of course intended to help those who have no knowledge of trigonometry to figure bevel gears, and is not meant to be an exhaustive treatise on the subject of bevel gears. However, although this is the case, the book will be found of considerable value to designers when they do not wish to go to the trouble of figuring the gears out by trigonometry. In figuring there are always chances of error, whereas the tables in this book can be used without fear of error. The book contains, besides the tables, chapters on tooth elements, construction of bevel gears, calculating bevel gears, forms of teeth in bevel gears, and how the tables are to be used.

* * *

Gas, Gasoline and Oil Engines. An up-to-date work descriptive of their theory and power, illustrating their design, construction and operation for stationary, marine and vehicle motive power; by G. D. Hiscox, M.E.; 413 pages; 312 illustrations and diagrams; bound in cloth; sold by the Book Department of MacLean Publishing Co., Limited, Toronto, at \$2.50.

The gas and gasoline engine is rapidly becoming a very popular motor, and everyone interested in power and its production should become familiar with this class of power producers in all its details. There is very little literature in circulation describing explosive motors, and for that reason this work is of great value. A review of the contents of this book will give a good idea of the information that may be obtained from it. The book contains chapters on theory of the gas and gasoline engine, utilization of heat and efficiency in gas engines, heat efficiencies, retarded combustion and wall cooling, causes of loss and inefficiency in explosive motors, economy of gas engine for electric lighting, the material of power in explosive engines, gas, petroleum products, acety-

lene gas and alcohol, carburetters, atomizers and vapor gas for explosive motors; cylinder capacity and dimensions of gas and gasoline engines, mufflers on gas engines, governors and valve gear, igniters and exploders, hot tube, electric jump spark, hammer spark, induction coil and dynamo; cylinder lubrication; the management of explosive motors; pointers on explosive motors; the measurement of power by pony brakes, dynamometers and indicators; speed measure; explosive engine testing; types of explosive motor; various types of stationary engines, marine and vehicle motors; United States patents on gas, gasoline and oil engines and their adjuncts—1875, to January 1, 1904.

MANILA HEMP SELLS AT ADVANCE

The tendency of prices for Manila hemp continued towards a higher basis and business was transacted at an advance of 1-8c per pound. Manufacturers continue to give fairly close attention to the market as buyers, it being the general belief that they have no reserve stocks of consequence upon which to draw. Offerings of spot supplies were only moderate, and there was no pressure from the primary market. Business reported for the day was 1,000 bales of a good mark of fair current for December-January shipment at 95-8c and 500 bales superior seconds for October-November shipment at 91-8c. It was learned that the recent sale ex the steamer Schuykill referred to in our last issue amounted to about 250 bales and the price paid was 93-4c. A fairly firm market was reported for sisal hemp. No sales for shipment were reported; nevertheless there were indications that a sale for October-November shipment had been made since the opening of the week at 71-2c. Istle hemp was firmly held at unchanged prices. Jute and jute butts were reported unchanged and firm. —New York Journal of Commerce, Oct. 19.

GALT BOARD OF TRADE.

The annual meeting of the Galt Board of Trade was held on Oct. 13. Officers elected are as follows:

President—Joseph Stauffer.
Vice-President—J. H. Fryer.
Secretary—A. G. Donaldson.
Treasurer—James A. Warnock.

The retiring President, Mr. R. O. McCulloch, in his valedictory, voiced the sentiment that Canada is on the eve of a great national advancement in commerce and manufacturing.

PAINT, OIL AND BRUSH TRADES

Tariff Influence on English Varnish Sales

WITH reference to the interview with Mr. Thos. Reade, of Wolverhampton, England, which appeared in the Oil and Colourman's Journal, and is repeated upon page 42 of last week's Hardware and Metal, Mr. William H. Evans of the Canada Paint Company, of Montreal and Toronto, takes exception to the paragraph which reads as follows:

"I don't think we have much to complain of as regards Australia, Canada, New Zealand, or India. Of course, if Canada were to become a varnish-making centre of importance, then the duty might tell; but at present practically all the varnish that is used there comes from England."

Mr. Evans remarks: "If Mr. Reade will take the trouble to visit Leslie street, Toronto, Canada, he will plainly see a modern varnish plant occupying over two acres of space, running full time, owned and controlled by the Canada Paint Company, who ship hundreds of gallons of choice coach and furniture varnish every working day chiefly, of course, to the Dominion of Canada, but shipments are also made at regular periods to the Old Country as well."

Deceptive Branding of Leads.

IN the report of the committee on white lead read at the National Paint, Oil and Varnish Association's recent convention, the following paragraph, which is worthy of general attention, appears: "It is the clear opinion of this committee that the position of graded leads is not strengthened by the misrepresentation of brand which would make them appear as pure leads. A buyer with ordinary intelligence sees in the price an obvious contradiction of this claim, although he may be willing to employ the deception as a means of in turn deceiving his own customers. But the incorrect branding seems to cast doubt upon the character of all graded leads, and encourages that form of legislation which, in attempting to protect the public from fraud, imposes impracticable and unnecessary restrictions upon legitimate commerce. It seems worth while, therefore, for the grinders of these leads to consider whether their own interests are not

menaced by those who indulge in the deceptive branding in any form."

Flaxseed at Chicago.

THE week as a whole has developed a little strength in the flaxseed market. The receipts of seed at northwestern points are not as heavy as was expected, owing in part to the lateness of the season and in part to the eagerness of farmers to get their wheat to market. This is a strengthening factor and accounts in a measure for the higher prices that were recorded this week. Cash No. 1 Northwestern advanced 1½c over our quotations of a week ago. October seed closed yesterday 4½c higher than a week previous. But the high points on all the options were touched in the middle of the week, as is shown by the review of the market given below. There seems to be less manipulation of the market now than at any time previous to October 1

on this crop. It is taking care of itself largely on the basis of comparatively light receipts and a good demand for seed. Quotations, Tuesday, Oct. 18: October \$1.09½ bid and December \$1.12½ bid.—Paint, Oil and Drug Review, October 19.

Turpentine at New York.

A slight change was made in the local market for spirits turpentine. Owing to the dullness of business latterly some receivers showed more of a desire to move supplies and sales were made of about 75 barrels at 55½c for machines. This price, however, was not general, some of the trade holding for 55½c and declined to sell at below this price. Southern advices were firmer. Savannah reported that the Standard Oil Co. had entered that market as a buyer, taking the receipts at 52c and the market closed firm at this figure.—New York Journal of Commerce, October 20.

The Paint of Quality



The first and most important object in making Hollywood paint is to get the Quality right, then regulate the price accordingly.

This is why Hollywood costs a little more than some others; but it is cheap paint because of its Quality.

In Paste, Ready-Mixed and Floor.

THEY WEAR ON THE JOB, NOT OFF IT

The Imperial Varnish & Color Co.

TORONTO, CANADA.

LIMITED,



ONLY good stuff will wear the havoc of time and change. Our paints, oils and varnishes must be good stuff, else they would not last and wax in favor as they are doing.

WAGNER'S Carriage Paints

are quite the best made. We are sole manufacturers of this widely known and completely trusted line. Our catalogue tells you more about them. Send for it.

STANDARD PAINT & VARNISH CO., Limited, Windsor, Ont.

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size. Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street

BRITISH BUSINESS CHANCES.

Firms desirous of getting into communication with British manufacturers or merchants, or who wish to buy British goods on the best possible terms, or who are willing to become agents for British manufacturers, are invited to send particulars of their requirements for

FREE INSERTION

in "Commercial Intelligence," to the Editor

'SELL'S COMMERCIAL INTELLIGENCE,'

Temple House, Tallis St., Temple Avenue,
London, E.C.

"Commercial Intelligence" circulates all over the United Kingdom amongst the best firms. Firm communicating should give reference as to bona fides.

N.B.—A free specimen copy will be sent on receipt of a post card.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

Get your GLUES from

The GROVE CHEMICAL CO., Limited

Appley Bridge, Lanc, England.

Our ordinary grades are better than ordinary, and we can supply special makes for special purposes. SCOTCH GLUES, BOX GLUES, COLOGNE GLUES for Paper Makers. Size of all kinds. Send your name for our printed matter.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO

MONTREAL

LONDON

OTTAWA

WINNIPEG.



Aluminum Paint

is a ready seller at this time of year. People want it for stove pipes and radiators, and if they have used "Island City" brand they want it again. How is your stock?

P. D. DODS & CO., Montreal  **Toronto**  **Vancouver**

Paint and Oil Markets

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street.
Montreal, Oct. 21, 1904.

A FORWARD movement has taken place in paints and oils recently, which is usual, seeing that there is not more than a good clear month before freight rates are advanced. Dry colors have been in good demand, especially oxide and vermillion. Fine colors for decorating purposes are being asked for, indicating that the painters are busily employed. In putty it has been difficult to keep up with the demand. The favorite brands of white lead are being shipped to all parts of the Dominion. Varnishes are feeling a healthier movement and liquid paints have been in fair request during the past week. There are no changes of moment. The markets may be generally noted as being firm, with the almost complete absence of a sagging tendency in prices. Linseed oil has dropped 1c a gallon.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2 \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1. 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Turpentine—Single barrels, 81 1-2c per gallon; two to four barrels, 80 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs. The above prices are net 30 days; for longer terms prices are higher. The market is firm.

Linseed Oil—Raw, 1 to 4 barrels 44 to 45c.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4' to 9 1-4c in whole-sale lots, and 1-2c additional for small lots.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front street east,
Toronto, Oct. 21, 1904.

REDUCTIONS in linseed oil and turpentine are the features of the situation. The market is now steady at the new basis. White lead is firm at \$4.65 and some jobbers claim an advance is inevitable. Red lead shows no tendency to change. There is a scarcity of putty in bladders. Other lines continue at the old basis. We quote:

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lbs. and upwards: 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs., \$4.25; ditto, in kegs of 100 lbs., \$4.50; No. 1, in casks of 560 lbs., \$3.75 to \$4; ditto, in kegs of 100 lbs., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 to \$2.62 1-2 per gallon; No. 1 \$2.50, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 46c; boiled, 49c; 5 to 9 bbls, raw, 45c; boiled, 48c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls, 79c; 2 to 4 bbls, 78c, Toronto, Hamilton, London and Guelph; 5 bbls and over, f.o.b. point of shipment, net 30 days. For

less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb.; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lbs., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2c per lb. and 8 1-2 for single tins.

Window Glass.

MONTREAL.

The glass market continues very firm and the advance prices noted last week are being strictly maintained. Stocks are moving well and although there may be a scarcity pending, it is not felt as yet. We quote: First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent discount thirty days.

Have Opened a Toronto Office.

The Woodstock Varnish Co. have opened a Toronto office at 81 Church street, with Mr. W. T. Powell in charge. They are manufacturing a full line of

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green

of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes

of CHAS. TURNER & SON,
LONDON.

Please mention **HARDWARE AND METAL** when writing.

WONDERFUL WONDERFUL

Just what people say who are familiar with the
hundred and one uses of

GILLETT'S LYE

No wonder that the hardware dealer is able to sell
case after case of this wonderfully useful household
article.

E. W. GILLETT COMPANY LIMITED
TORONTO

"Silverware that sells."

2
Months before Christmas

EVERY WEEK UNTIL THEN

will see people buying

SILVERWARE
for
WEDDINGS and GIFTS

If you have it, you will sell it, and silverware
pays well.



Standard Silverware

is well named, for it is standard. It is not possible
to make a better article: **base metal** is the best
composition known to the trade; **Sterling Silver**
used for plating and used generously; **Designs**, the
newest and most attractive to be seen; **Workman-**
ship of the highest order. **Standard Silverware**
is readily sold. No dealer need hesitate to recom-
mend it.

Sell goods of known worth.

Our catalogue to those who have not a copy
already—free. It is worth having on hand.

STANDARD SILVER CO.

LIMITED

HAYTER STREET, TORONTO.

TAKE TIME BY THE FORELOCK


A business proverb says: "He who carries the STOCK does the BUSINESS."

Anticipate your wants. Do not wait until the rush which precedes the commencement of the **Winter Freight Tariff**.

Ample Stocks.

Quick Shipment.

**THE
CANADA
PAINT
COMPANY
LIMITED
MONTREAL
TORONTO**

 **NOTE TO THE HARDWARE TRADE:** Please revise and send to us one of your special color cards for season 1905. We are now ready for them.

varnishes and will make a specialty of quick-drying varnish, much of which class of varnish has hitherto been imported.

A New Varnish Firm.

The Victor Varnish Co. have purchased the plant of the Robertson Varnish Co., 400 Eastern avenue, Toronto. Mr. Fennell, of Berlin, is president of the new company. They will sell through the hardware trade.

DOMINION IRON AND STEEL CO.

THE annual meeting of the Dominion Iron and Steel Co. was held in Montreal on Wednesday, October 19th, in the Montreal Street Railway Building. Reports submitted by President J. H. Plummer, Vice-President Frederick Nichols and Graham Fraser, director of the works, indicated that the affairs of the company are in a better condition than for some time past. It is now felt that with reasonable good fortune the company should be able to meet all expenses and make a profit.

In the course of his address, President Plummer said that the new rod mill which has recently been completed is pronounced by experts to be the best ever built and it is to-day capable of turning out the very best quality of rods. Moreover he stated that it is now capable of turning out sufficient supplies of rods to meet the requirements of all Canadian industries. These rods are giving satisfaction to Canadian manufacturers using them.

The Dominion Iron and Steel Co. are now preparing to manufacture open-hearth steel rails which the president claimed would be superior to the Bessemer rails.

The former officers and directors were re-elected.

PRACTICAL HINTS ON ADVERTISING.

SOME advertisers find it impossible to get any enjoyment out of their meals because some competitor is worrying them. It is generally some larger house that has made a success by judicious advertising, and its rivals can never forgive it for being so prosperous.

The larger house was a small house, too, once upon a time—but the right sort of inside management and outside publicity started it along the road to success.

It may seem that the larger house has the field pretty well covered and cannot

be successfully contended with.

This is the worst kind of a fallacy.

It is the excuse of the man who thinks that other people are holding him down.

As a matter of fact, nothing is holding him down but his own failure to properly utilize the most valuable of all business ammunition—advertising.

There are some reasons why he can serve customers better than the other house, or the other house would have all the trade. Let him present these reasons forcibly and pertinently, and it won't be long before his increased business will keep him too busy to worry about competition.

* * *

Imitation is the sincerest form of flattery, and it is also very bad advertising.

When an advertiser makes a pronounced success, every Tom, Dick and Harry in his line of business proceeds to copy his style of ad and tries to share the prestige he has built up for himself.

His borders, type, cuts, and copy are followed as closely as possible—and this generally means about one thousand miles in the rear. The imitation may look something like the real ad at first glance, but the intelligent reader easily discovers the fraud and is not deceived. On the contrary, his impression of the imitating firm is very apt to be decidedly unfavorable.

Don't copy every move of your competitors—get up an original style of your own, and let others copy it if they want to. You won't care if they do, if it is a good style, for people will always distinguish it from its imitators and their ineffectual efforts will just be so much free advertising for you.

It is a lot more comforting to be flattered in this way than to flatter others.

* * *

Talk in your ads the way you would if you were talking to some one who hadn't the slightest idea of what your business was.

Cut out the technicalities and the trade terms and get down to plain English.

A good way to find out whether your ad is plain enough and will be easily understood, is to let a small boy read it over before you send it to the publisher.

If there is any sentence he does not understand, re-cast that sentence until he knows just what you mean.

If there is any word too long for him, cut it out and use a shorter one instead.

I know you are not addressing your ads to small boys, but the principle is

SILK PURSES OUT OF SOW'S EARS.

There's an old Scotch saying that "you canna mak a silk purse out of a soo's lug," which in other words, is to say that unless you have the right material you cannot get the results.

That is why we are so particular about the material we start with, in the manufacture of our "C" brand Horse Nails: The best Swedish charcoal, mild, toughened steel nail rods. We can buy lower priced material, and you nor we could not tell the difference by looking at the finished nail—but there is a difference—and a big one, in the wear and tear you will get out of our "C" quality Horse Nails as compared with the other. While the lower cost to the manufacturer may be reckoned in dollars per ton, by using cheaper nail rods, yet to the farmer the economy in the completed nail is too small to be worth a moment's consideration, if he desires the very best or "C" brand Horse Nails.

We claim that there is no better material known or used in the manufacture of Horse Nails in the world, than in the manufacture of the "C" brand. That's a pretty big statement, but we invite any manufacturer in the world to disprove it! We shall be pleased to get a "straight tip" where anything better than we are using is to be procured.

Oh, no! you can't "make silk purses out of sow's ears," nor Horse Nails equal to the "C" brand except with the "C" quality and process. We have been making nothing else but Horse Nails for 39 years, and you have the benefit of that experience in every box of nails bearing our name and trade mark. Send your orders to the wholesale dealer for "C" brand, and vote for the best man at the coming election.

Canada Horse Nail Company
MONTREAL.

a good one just the same. If the small boy understands it, every one who reads it will know what it is all about.

—Charles Austin Bates.

BUSINESS CHANGES.

ONTARIO.

THE Milner Petrolia Wagon Co., Limited, Petrolia, have changed their style to Petrolia Wagon Co., Limited.

Chas. Summers, carriage maker, Winchester, Ont., has assigned to Samuel S. Reveler.

QUEBEC.

E. James & Co., roofers, etc., Montreal, have dissolved.

Noel Paquet, tinsmith, Hull, has assigned to V. E. Paradis.

A. Guimond & Co., hardware dealers, Montreal, have compromised.

Rudolph Madore has registered as president of the Consolidated Construction and Power Co., Limited, Montreal.

Joseph Desforges & Co., wholesale and retail hardware dealers, Montreal, have assigned; meeting of creditors on the 25th inst.

MANITOBA AND N.W.T.

H. W. S. Luckhardt, hardware merchant, Bowden, has sold out to George Whitlock.

IRON AND STEEL STATISTICS.

The production and consumption of iron and steel in Great Britain, the United States and Germany for 1900, 1901 and 1902, are given by the British Trade Journal as follows:

PIG IRON PRODUCTION.

	1900—tons.	1901—tons.	1902—tons.
United States	13,789,000	15,878,000	17,821,000
United Kingdom	8,960,000	7,929,000	8,680,000
Germany	8,507,000	7,867,000	8,518,000

PIG IRON CONSUMPTION.

	1900—tons.	1901—tons.	1902—tons.
United States	13,554,000	15,860,000	18,419,000
United Kingdom	7,705,000	7,285,000	7,798,000
Germany	9,105,000	7,985,000	8,314,000

STEEL PRODUCTION.

	1900—tons.	1901—tons.	1902—tons.
United States	10,188,000	13,474,000	14,947,000
United Kingdom	4,901,000	4,904,000	4,849,000
Germany	6,362,000	6,211,000	7,422,000

A ROOFING AWARD AT ST. LOUIS.

J. B. Gass, 27 Common street, Montreal, who is Canadian sales agent for the "Rex Flintkote" roofing, received this week from the headquarters of his company in Boston some very pleasing intelligence. "Rex Flintkote" roofing has been awarded the Grand Prize for roofing by the judges at the St. Louis Exposition. This is a very striking tribute to the merits of this company's brand of roofing.

Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Philip D. Johnston; 65 full-page plates and 2 folding plates, with full text and 184 illustrations; cloth.....\$2.00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire buildings for bells, alarms, annunciators, and gas lighting from batteries. 55 pages, illustrated; paper, 25c.; cloth..... 50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed.....\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages..... 25c.

Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for mixing and using cements. 96 pages.....\$1.00

Metallurgy of Cast Iron.

By Thos. D. West. Showing processes involved in its treatment, chemically and physically, from the blast furnace, through the foundry, to the testing machine. 627 pages, 153 illustrations....\$3.00

Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and zinc; also tinning gray iron castings....\$2.00

Practical Plating and Polishing.

Best and Most Approved Methods of Preparing and Cleaning all Metals for Electro-Plating and Polishing. 114 pages, illustrated..... 80c.

New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as applied to all branches of sheet metal work, 430 pages, 744 illustrations.....\$5.00

Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams, tables, 123 pages, 53 figures.....\$1.00

Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates.....\$1.50

Furnace Heating.

By Wm. G. Snow. Comprehensive treatise on warming buildings with hot air, with appendix on furnace fittings, 170 pages, 90 illustrations, cloth.....\$1.50

Plumbing Problems.

House drainage and plumbing, 309 pages, 146 illustrations.....\$2.00

Practical Hints on Joint Wiping.

For beginners in plumbing, 66 pages..... 25c.

Kitchen Boiler Connections.

A selection of practical letters and articles relating to water backs and range boilers. Fifth edition, enlarged.....\$1.00

Steam and Hot Water Fitters' Text Book.

A book prepared for the Steam and Hot Water Heating Course at the New York Trade School, with supplementary chapters on house heating, specifications and surface estimating, by Thos. E. McNeill. 140 pages; 5 x 7 in.; numerous illustrations; cloth binding.....\$1.00

Easy Lessons in Roof Measurements.

Twelve short lessons on figuring from architects' or scale drawings the amount of material required to cover a given surface in flat, hipped or irregular shaped roofs, by W. Neubecker. 31 pages; 5 1/2 x 8 in.; 12 illustrations; paper cover..... 25c.

Enquiries for above books should be
sent to

BOOK DEPARTMENT

HARDWARE AND METAL,
Toronto

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

OFFICERS.

President—Robt. Ross, Toronto.
Vice-President—A. J. Hammond, Winnipeg.
Secretary—J. A. Gordon, Montreal.
Treasurer—F. G. Johnson, Ottawa.

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Quebec—W. R. J. Hughes, Montreal.
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Manitoba—James Mold, Winnipeg.
British Columbia—James Coughlan, Victoria.

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President—Thos. O'Connel.
Secretary—J. Gordon.

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President—Gil. Julien.
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LONDON.

President—B. Noble.
Vice-President—Wm. Smith.
Secretary-Treasurer—E. H. Russell.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Oct. 21, 1904.

IN all metal lines the market is strong and fairly active, but the heating and plumbing supplies market has reached a stage of activity far and beyond all the others at present. New buildings to be newly installed with heating and plumbing apparatus, and old ones to be renovated, before the actual cold weather sets in, are creat-

ing a splendid demand. In iron pipe stocks are low and there is every likelihood of an advance in price. We quote new discounts this week on soil pipe and fittings, otherwise prices remain unchanged.

Range Boilers—The season for these started out very briskly and has continued almost unabated up to the present and indications would show that the same condition of affairs will obtain for some little time to come. Our quotations are as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—Although there has been an advance in lead and further indications of another advance, the price of lead pipe has not been changed. There is a fairly good demand. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—No particular activity exists in soil pipe and fittings this week. We quote new discounts this week. Soil pipe, standard, 50 per cent. and 10 per cent. off list. Standard fittings, 50 per cent and 10 per cent and 10 per cent off list. Medium and extra heavy, soil pipe, 60 per cent. off; fittings, 60 per cent. and 10 per cent. off.

Iron Pipe and Fittings—There is a good demand and supplies are also in good shape. Prices remain the same. We quote: Discount on all size of nipples up to 6 inches, 67 1-2 to 70 per cent.

Iron Pipe—Stocks are low and it is evident that they will continue so for some time as the rolling mills, working to their utmost capacity, cannot keep up with the demand. It was mentioned last week that there was a likelihood of a shortage, and such is now the case. Prices remain the same, but the market is much firmer, and very little cutting is reported. We quote as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in.,

\$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—The market has not advanced as was expected, although the raw material has advanced considerably. We quote: Bar solder at 17 1-2c, and wire at 18c.

Soldering Irons—A nominal amount of business being done. Prices are as follows: 1 to 1 1-2 lbs. 37c per lb.; 2 lbs. and over, 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Oct. 21, 1904.

IN practically all lines there is an excellent business doing. Locally the fine weather has given a great impetus to building, providing an opportunity for rushing through many contracts which were delayed by the strike. The consequence is that some of the shops cannot get enough men to cope with the big trade doing. In the other cities and towns a similar demand for all lines is reported. Prices show no change. We quote:

Lead Pipe—A good trade continues at steady prices. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—An increase of 5 per cent. is noted in the discount on headers and nipples. Prices are steady. We quote nominally: Malle-

A profitable paint trade doesn't end with mixed paints, but it often commences there. Paint trade expands easily. It leads out to Paint



Brushes, Enamels, Gloss Paints, Stains, Varnishes, Glass and many other lines, all bringing in handsome profits. But the foundation must be right. A risk on this is a risky risk. What line have you got?

Could it be better? Let us tell you about

RAMSAY'S PAINT

and what we can do for you; what the price is and how it is advertised. It will assist you to a paint trade.

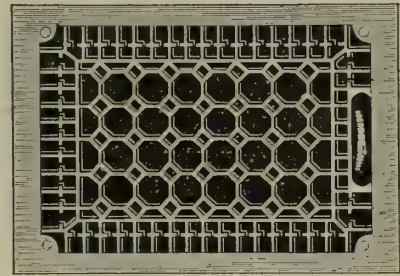
A. RAMSAY & SON COMPANY,

Established 1842.

MONTREAL

Paint Makers.

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



The Standard Ideal Sanitary Co. Limited.

MANUFACTURERS OF

Porcelain Enamel Bath Tubs Lavatories Sinks Slop Hoppers

"MADE IN CANADA."

Porcelain Enamel Bath Tubs,

Porcelain Enamel Sinks,

Porcelain Enamel Lavatories,

Porcelain Enamel Lipped and Plain Urinals,

Porcelain Enamel Slop Hoppers,

Porcelain Enamel Factory Wash Sinks.

THE ONLY MANUFACTURERS OF PLUMBING GOODS IN CANADA

Head Office and Factory:

Port Hope, Ont.

Sales Office:

50 Colborne St., Toronto.

able fittings 20 per cent for American and 35 per cent. for Canadian; cast iron (standard), 65 per cent.; headers, 60 per cent.; flanged unions, 60 per cent.; malleable bushings, 57 1-2 per cent.; cast iron bushings, 70 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A steady demand continues with the discount unchanged at 15 per cent.

Iron Pipe—Competition is not so keen as has been the case for some time, but

there is still some cutting: We quote: Black, 1-4 in., \$1.97; 3-8 in., \$2.15; 1-2 in., \$2.28; 3-4 in., \$2.86; 1 in., \$4.10; 1 1-4 in., \$5.62; 1 1-2 in., \$6.72; 2 in., \$8.98. Galvanized, 1-4 in., \$2.80; 3-8 in., \$2.86; 1-2 in., \$3.14; 3-4 in., \$4.01; 1 in., \$5.75; 1 1-4 in., \$7.85; 1 1-2 in., \$9.43; 2 in., \$12.57.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.

HINTS ON JOINT WIPING.*

WIPED joints are made to join lead, brass, block tin and copper pipes. They are used in joining lead to brass, copper to lead, etc. Sometimes also iron is joined to iron or other metal by a wiped joint. The ability to wipe joints of any style or size and in any probable position requires years of practice; but that should not deter any one from mastering the art—at least in its most useful forms—if he wishes to identify himself with practical plumbing. The argument which drifts so many of our young mechanics into slighting that branch of the business termed joint making—viz., that wiped joints will soon be things of the past, etc.—has been put forward for many years, but the wiped joint is still popular, and is likely to continue so. There are many ways of making joints other than that of wiping, but they are preferable only upon certain work, and the efficiency of such joints, as well as wiped joints, is always in proportion to the skill employed in making them.

It would be all but impossible to describe every action necessary to wipe a joint, and although the results are the same in general when the work is properly done, the temperature and composition of the solder, temperature of the weather, the kind, size and position of the joint, etc., all modify the proceedings to a certain extent. As the shop offers the best facilities of joint work—that is, a good bench, weights, blocks, warmth, convenient fire, plenty of time, etc., the reader will find shop work easiest to master. A great many little things in joint making are more naturally understood than described; and, furthermore, any one of a great many little things may cause a failure if for-

gotten or neglected. Not only the appearance, but the efficiency, of a joint depends upon the method and thoroughness of the operations when preparing it. For the above reasons the young plumber, before beginning to wipe a joint, should ask himself some of the following questions, and follow the answers of his judgment: Is the joint firmly set? Is the cleaning well done and greased to the proper length? Are the ends so joined that no solder will get into the pipe? Is it well soiled? Is the pipe dry and no undue current of air passing through it? Is there enough solder to produce the proper heat? Is the solder hot enough? Is the cloth soft and with sound face?

Wiped joints should be proportioned to the strength and purpose of the pipe, and not to the diameter of it. For example, the joints upon pipes to convey certain mineral waters require to be from two to three times as thick as the pipe itself from where the ends join to the surface of the joint, because some ingredient in the water attacks the metals composing the solder and a shallow joint would soon be destroyed. In ordinary low-pressure work solder one and one-half times the thickness of the pipe, well pressed up, is sufficient. In some places where joints do not last well, as on copper pipes joined by wiping in distillery work, or in the case of copper and lead joined in range connections some mechanics seem to have formed the idea that nothing but extra long joints will stand. However, the usual form of joint is all that is necessary in such cases, if the interior of the pipe be cleaned and trimmed for several inches, then across the end back the proper distance on the outside, as the decomposition or disunion of the solder commences at the edge of the tinning.

Concerning the width of joints, a joint upon 5-8-inch supply pipe is ample

width for a joint upon 8-inch soil pipe, both being about 2 inches long, and a section through each would show about the same strength. In two examples of round joints one a 5-8-inch supply, the other a 5-inch soil pipe, the solder looks to be about the same thickness in both joints, soil pipe joint is considerably the lighter. The deception is caused by employing different methods to prepare the ends. The receiving end of the soil pipe joint was expanded to receive the spigot ends. The receiving end of the soil pipe bored and rasped to fit.

Avoid wiping stop cocks into crosses, for the reason that, should any one of the branches or cocks become defective from any cause, the entire joint would have to be made over; and they are mean joints to rewipe at best.

PREPARING THE JOINT.


To prepare a wiped joint, first straighten the pipes to be joined. Stop cocks and joints interfere with the straightening process and it is almost impossible to knock the kinks out of a pipe after it is in place without bruising either pipe or joints. Short pieces of supply pipe can be straightened more easily by catching with the fingers and raising each end alternately 12 or 15 inches and then letting drop upon a smooth board or floor. Always turn the pipe a little after each stroke. If the pipe is heavy a little force may be added to the strokes. Long pieces may be straightened by the boy and plumber holding the ends and rapping the pipe against a smooth board between them, as they would a rope. The reader will understand that the pipe must be comparatively straight before swinging it. Short bends near the ends can be straightened with the bending or kinking iron.

The writer has a tool which he uses as bending and kinking iron combined. It is nothing more or less than a piece of broken hoe handle, the shank of which is filled with wood. Without inserting more than an inch both bearings are made inside of the pipe, thereby doing the work without marring the end. The double bend on the end receives the strain in such a manner that there is no danger of it turning to one side, as with the single-bend irons, and a kink can be removed without lifting the pipe or the fingers touching the bench. The tools necessary to wipe a joint are: Ladle, tapper, turn pin, compass, shave-hook, hammer, rasp, bending iron, large cloth, small cloth, soil cup, soil brush, hook to attach cup to solder pot when travelling.

Short bends in waste pipe, when near

*The above is from "Practical Hints on Joint Wiping," published by the David Williams Co., New York, and sold in Canada by the book department, HARDWARE AND METAL, Toronto, at 25c. The book is illustrated in a most practical and thorough manner.

THE AUER LAMP
GASOLENE



200 CANDLE POWER OF CLEAR, STEADY LIGHT.

The best and cheapest light for **STORES, CHURCHES and HOMES.**

Gives more light than a dozen oil lamps for half the cost. Makes its own gas without smell, smoke, wicks or grease.

Satisfaction Guaranteed. Send for Catalog.

AUER LIGHT CO. ————— MONTREAL

The Finishing Touch



in the construction of any building is the roof. Without a durable attractive roof the entire appearance and service of the building is unsatisfactory. Galvanized iron, tin, tar and shingles are being discarded on account of their unsatisfactory results, and

REX FLINTKOTE ROOFING

is fast becoming the universal roofing. It costs less laid than shingles, will outwear several galvanized iron roofs, is absolutely waterproof, and many buildings have been saved by its fire-resisting qualities. Our book on roofing, which we will send with free samples, is yours for the asking.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

"LOOK FOR THE BOY" ON EVERY ROLL

the ends, can be straightened with the handle of the dresser. When rolling out a piece of waste pipe from the coil do not forget to unroll a little more than is wanted. This will leave a straight end upon the coil, and more than half of the work of straightening short bends will be avoided. Use the drift pin to make pieces of waste pipe perfectly straight and round. Drift pins are made of box-wood and in two styles; one kind being about 3 inches long, with about 1-2 inch of one end the actual size of the pipe it is to be used in, the balance of the length tapering about 1-16 inch on each side, and the pin slightly rounded at both ends. The second kind is made nearly the same, being a little longer and with the large part in the middle, which makes it look very much like two of the first kind placed with the large ends together. The advantage of the second pin is that it can be driven from either end. To use the drift pin get the pipe as straight as possible, oil the pin and start it in with the hammer. If the pipe is short a piece of

quarter-round may be used to push the pin, either setting the stick upon something solid and using the weight of the pipe to force with, or striking the stick with a hammer. In long pieces, such as closet flush pipes, etc., the pin may be driven with a piece of gas pipe capped on the ends. Use large caps, that the pin may be forced straight. For the benefit of those who find a pipe kinked in an awkward place I will mention the old-time way of removing a dent. Sweat a piece of strap solder to the lowest place in the dent, then warm the dent with the torch, not too much, near the solder. Next gradually pull the dent out, taking care not to pull a piece out of the pipe. When the dent is well rounded out melt the solder off.

SQUARING THE ENDS,

The second step in preparing a joint is to square the ends of the pipe, which can be done with the rasp or knife. The third step is to rasp the ends; see that the bore of the pipe is true, and always rasp against the end; in this

manner no burrs are pushed over the end and the operator can see when the rasping is the proper depth.

When joining pipes of the same diameter rasp the spigot end evenly down to the bore. The face of the rasping should be at an angle of about 30 degrees, or less, to the bore of the pipe, or according to the tools used. If the operator prefers to bore out the female end, rasp according to the boring. If he prefers to expand it with the turn pin, rasp according to the angle of the turn pin.

A plumber should have more than one rasp, and each one suited to its work, as the rasp which cuts heavy work at a satisfactory rate would not do for a small medium-strength pipe. Heavy rasping should be finished with a rasp having medium size teeth, that the marks may be easily scraped out with the shave hook in case they get clogged with dirt.

(To be continued)

PIPE THAT IS PIPE.

THIS IS OUR BRAND

P-H



You Want It.

See that You Get It.



THIS IS OUR TAG.



TAKE NO OTHER.

BLACK AND GALVANIZED.

PAGE-HERSEY IRON AND TUBE CO., LIMITED, GUELPH, CANADA

Thawing out Frozen Ditches With Carbide.

A NEW use to which plumbers may put acetylene, says the Plumbers' Trade Journal. At Port Byron, N.Y., January 12, 1904, when the large town lighting plant was started, it was necessary to turn on the water from the mains in order to fill the big machine.

Of course, we all know what a "powerful" cold Winter the Winter of 1903-04 was, and after one of the diggers had spent about an hour trying to get a hole dug in order to get down to the valve so as to turn on the water, and had not made as much progress as a good healthy hen would make in one-half the time scratching sand in the middle of the road, we were puzzled to know what to do to thaw out the ground, which was apparently as hard as iron. It would dull the picks almost as fast as they would strike into the

would seep down into the ground and the frost would come to the surface, and after we once got it started and had the water boiling, it was an easy matter to shovel out the mud from the bottom of this small puddle, and we had no trouble whatever in getting below the frost, and it struck the writer as being a practical and easy way for doing this kind of work.

Furthermore, it was done so quickly, and at so little expense, that the writer considers it very valuable for any such purpose, and therefore thought it worthy of mention for the benefit of plumbers who may have occasion to use it for similar purposes.

It was remarkable to see how quickly the puddle of water reached a boiling point, and it remained so long as the carbide lasted, which was long enough to thaw out all the frost in the ground where we were obliged to work.

Building Notes.

A large tourist hotel is to be erected at Oak Bay, B.C.

The Government is building a new federal building on Hastings street, Vancouver.

Tenders are being called by the Department of Public Works for the building of the Royal Victoria Museum, Ottawa.

The Government is calling for tenders for the construction of a station at Windsor, N.S., on the line of the I.C.R.

A new school house is to be erected in Dalkeith, Ont.

The Department of Public Works at Ottawa are calling for tenders for the erection of a new armories building at Virden, B.C., and also tenders for alterations to the immigration building at Halifax.

Plumbing and Heating Notes.

Cuthbertson & Co., plumbers, Edmonton, N.W.T., have dissolved partnership.

Assignment has been demanded of C. E. Brodeur, plumber and tinsmith, St. Hyacinthe, Que.

Stevenson & Malcolm, Guelph, Ont., are adding three steamfitters and one plumber to their staff.

Much difficulty is being experienced in building operations in London, Ont., as a result of a shortage of plasterers in that city.

The sale of plumbing goods in the towns and villages of Ontario is much larger than has ever before been the case. It is quite evident that the use of these goods is increasing.

Mr. Watson Mashinter, of Mashinter & Co., Toronto, who was hurt at Lewiston some weeks ago and who has since been in the Memorial Hospital, Niagara Falls, N.Y., is now so much better that he is expected home shortly.

Mr. E. H. Russell, secretary of the Master Plumbers' Association of London, Ont., was in Toronto on Wednesday. Mr. Russell gives an encouraging report of associational work and of plumbing operations in London.

Purdy, Mansell & Co., Toronto, have the contracts for plumbing and heating in the new warehouse for W. R. Brock and for the Office Specialty Co., Toronto, for plumbing, heating and gas fitting in the Hospital for Epileptics, Woodstock.

Mr. J. W. Orum, an honored member of the Toronto Master Plumbers' Association, died at his home in Toronto on Saturday, after a long illness. The funeral, which was held on Monday, was attended by several representatives of the association.



An Exhibit of Walker Stoves and Ranges.

ground, and all kinds of suggestions were made as to the best way to succeed in accomplishing what was desired.

Some suggested building a fire of coke which, of course, would have done the work in course of time; but, while the matter was being discussed, the writer spoke to a small boy standing nearby and told him to go into one of the stores where they had an acetylene generator using large lump carbide and ask the man for about ten cents' worth of carbide.

Presently the boy returned with two large lumps about as large as a man's fist. The writer took them and threw them down on the ground and shoveled some snow on them and then lighted them.

In a remarkably short time, by shoveling snow on the carbide, I had a puddle of boiling water. This water

The Youngest Stove Firm.

Though the youngest stove firm in Canada the Walker Steel Range Co., Limited, Windsor, Ont., have already secured a strong foothold, particularly in Western Ontario. This firm have recognized the popularity of the steel range and have focused their ingenuity on the production of a range of this class of the best possible type, the result being the Walker Pilot Steel Range. The firm also manufacture Walker Oaks and hot blasts of superior design and finish. A catalogue giving full information regarding the Walker ranges and stoves will be sent on request to any reader of Hardware and Metal.

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tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

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Salt Glazed Vitrified



Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

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and Handsome Roof.**



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Will bring you profitable trade and satisfied customers. Comes in rolls ready to
lay, all ready covered with gravel. Requires no experience to lay, and lasts
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**NEW
Combination
Set**

Pressing, Flounce
and Sleeve
and Potts Iron.



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The H. R. IVES CO., Limited, Manufacturers, Montreal



New Process Oil Heaters.

RETURNED
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Are absolutely safe.
Produce intense
heat without smoke.
Simple as a lamp in
construction.

**Light
and
Durable**

Founts are remov-
able for Cleaning
and Filling.
Provided with Bail
Handle with which
they can be easily
carried to any part
of the house.

The Thos. Davidson Mfg. Co., Limited

MONTREAL.

No. 10—"New Process." Design attrac-
tive. Construction first-class.

No. 17—"Standard." Cheaper in quality,
but well proportioned and handsome in
appearance, and a strictly up-to-date heater.



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Japanese Pipe Varnish
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Write for prices.

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Contains No Acid

Acid tarnishes the cleansed surface.

YORK METAL POLISH

leaves a polish that abides.
No scratching, no hard work;
remarkable for speed.

Liquid or Paste

Sample Free on Request.

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Preparation for Cleaning Cutlery. 6d. and 1s. Canisters

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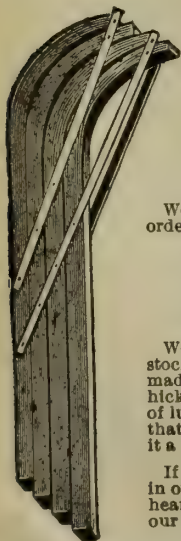
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that may be required. We make
it a point to fill orders promptly.

If you are in need of anything
in our line we will be pleased to
hear from you and we will give it
our prompt attention.

J. S. Loughhead & Son
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STOVES AND TINWARE.

Electric Heating.

EVERYONE has come to realize the advantages of electric heating, where cleanliness, simplicity, absence of smoke or smell or vitiation of the atmosphere are considered, over

Electric suspended unit heater, which transforms an ordinary utensil into an individually-heated one. So extensive is this line of devices that the dishes purchased from the 5 and 10-cent store, will be as available for use with electric heating units as the nickel and silver-plated cooking utensils have been in the past. Every household with electric lighting circuits will demand these

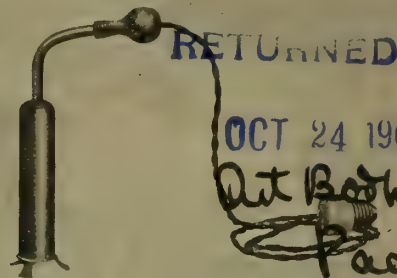


Fig. 1.—Suspended Unit.

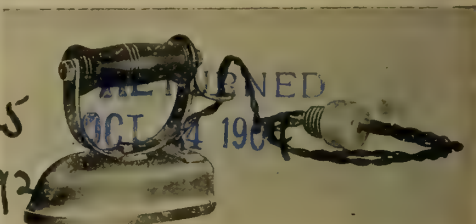


Fig. 2.—Three Pound Flat Iron.

other forms of lighting, yet electric heating, although it is not fully recognized, has a still further claim over other forms of heating. Ordinary heating

convenient devices. They will be so commonly known and will become so indispensable as a household utensil that additional residence customers will

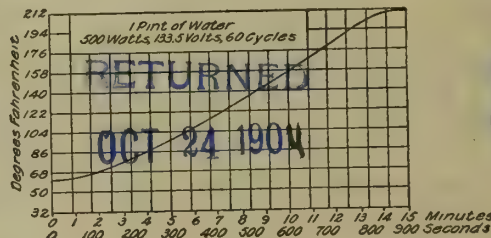


Fig. 3.—Diagram showing comparative efficiencies of the disk stove and the centrunit utensil in boiling a pint of water.

stoves give off only one-quarter to one-half of the heat energy stored up in the fuel, while radiators and hot water plants yield about 70 per cent. of the latent heat of coal burned in their boiler furnaces. This is due to the high temperature of the escaping gases, and the escape by radiation. In the case of electric heating apparatus the efficiency is practically one hundred per cent. as all the heat is generated for the purpose required. This is the line that should be exploited by the hardware dealer where electric power is available during the day time. There are here illustrated some of the apparatus manufactured by the General Electric Co., which will be found of interest.

Fig. 1 illustrates the form of General

quickly follow. When the people once appreciate the benefits derived from such devices they will demand them as common household utensils.



Fig. 4.—Egg Boiler Interior.

In describing the edgewise winding used as a heating unit, particular attention is called to its simple construction.

THE "GOOD CHEER"

Art
Base Burner

We have put on

**MORE MEN
MORE PATTERNS
MORE FLASKS**

so as to keep pace with the
unprecedented demand for
this popular Heater.

We can take care of your
orders at present, so send
them on.



There is nothing
"just as good"
made yet
—nor likely to be.

IT HAS
**NO
FAULTS**

Firepot removable
without turning a
single bolt.

Has Duplex Grate
and large ash pan.

Every stove a
Double Heater.

Has Steel Oven.

With or without
oven.

The JAMES STEWART MFG. CO., Limited
Woodstock, Ont. and Winnipeg, Man.

With this design the dishes are so made as to afford perfect ease in disassembling for repair. The units are the same dimensions, the dishes being suitable for either 250-watt or 500-watt units. Thus standardization is effected, and utmost simplicity assured. This is an essential point in favor of extensive use. The unit illustrated lends itself readily to a location in the utensil, that is valuable in respect to high efficiency. The durability of the unit will be appreciated when it is known that for more than a year the edgewise winding units have been used at the Lynn works of the General Electric Company, in connection with a furnace for drying out transformer coils. The severity and length of such service has led to the belief that this heating unit is more durable than any previous design. This feature has appealed to us so strongly that advantage has been taken of using high temperature heat, thus securing maximum work in quickest time and at minimum expense.

The electric flat iron offers a splendid illustration of the convenience that cannot be secured with gas. Fig 2 is an illustration of the 3-lb. size.

Fig. 3 represents a diagram showing the comparative efficiencies of the disk stove and the centrunit utensil in boiling a pint of water. Fig. 4 shows an egg boiler interior, which is an instantaneous electric water heater.

The Rusting of Stove Pipes.

THE ruinous rusting of stove pipes is a matter that is often forcibly brought to the attention of users of anthracite coal stoves. Pipes which have been in use for two or three years will sometimes become so eaten by rust that little metallic iron is left, and the pipe will crush in the hand. This destruction is more rapid and complete than with the ordinary weather-rusting of sheet iron, writes J. M. Blake, in the Scientific American. The cause is generally attributed to the sulphur in the coal. There is not much doubt that the destruction of the mortar in chimney tops is due to the sulphur acids; but some experiments made by the writer a number of years ago resulted in showing that the sulphur has little to do with this injury to pipes. The true cause is the production of ammonia compounds during combustion. Both the chloride of sal-ammoniac and the sulphate are formed in the pipe and mix with the ashes and soot. It remains harmless during the dry cold weather, but readily absorbs moisture by contact with damp air as warm weather comes on, when its

action begins, and continues so long as the cause remains. The effect of sal-ammoniac to induce rusting in iron is well known. It is also well known that bituminous coal gives off ammonia when distilled—the supply obtained at the gas works being considerable. We would hardly expect anthracite coal to produce an appreciable quantity; but when the writer mixed a little slacked lime with some dust taken from flues or pipes a strong smell of ammonia was developed, thus practically demonstrating that this salt is produced in quantity sufficient to cause injury.

The removal of the ammonia salt is a matter involving difficulties. If we start with a new pipe, and brush out every particle of dust before the dampness has been absorbed, the removal will be complete, and no harm will ensue. This, however, is an exceptional case. In our climate we are often obliged to keep up our stoves and furnaces through the first warm, damp days of May, and sometimes early June. When rust has once commenced, and particularly in the case of neglected pipes, the crust of rust persistently holds the ammonia salt. Two ways seem to effect its removal from the pipes. First, by immersing and thoroughly soaking the separated sections for several hours in water—running water, if possible; and, second, by roasting the pipes over a fire to a red heat. In my experiments both methods were tried with equally satisfactory results.



Stove Dealers Have Trouble

with stove linings and cements. Hard to find an out and out good thing—so some say. We offer

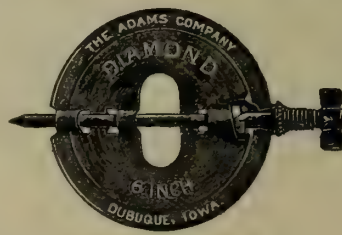
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as a perfect article, and sell it on a money-back guarantee. Get our circular.

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DIAMOND STOVE PIPE DAMPER AND CLIP.

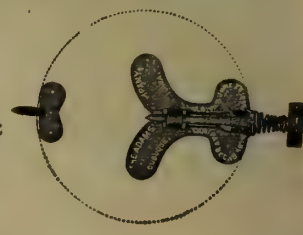


U. S. Patent June 25th, 1895.
Canadian Pat. Dec. 13th, 1894.

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HARDWARE
TINWARE
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for furnace pipe, to support
the sheet steel blade.



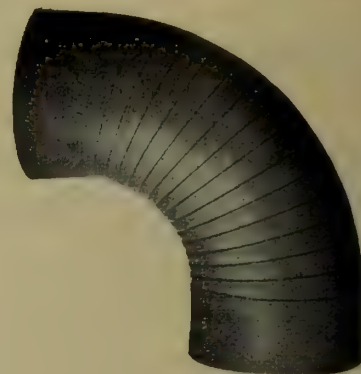
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THE ADAMS COMPANY, Dubuque, Iowa, U.S.A.
TAYLOR-FORBES CO., Limited, Guelph, Ontario.

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FREE AND BONDED STORAGE

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Cooper's Improved Patent
One-Piece Stovepipe Elbows.



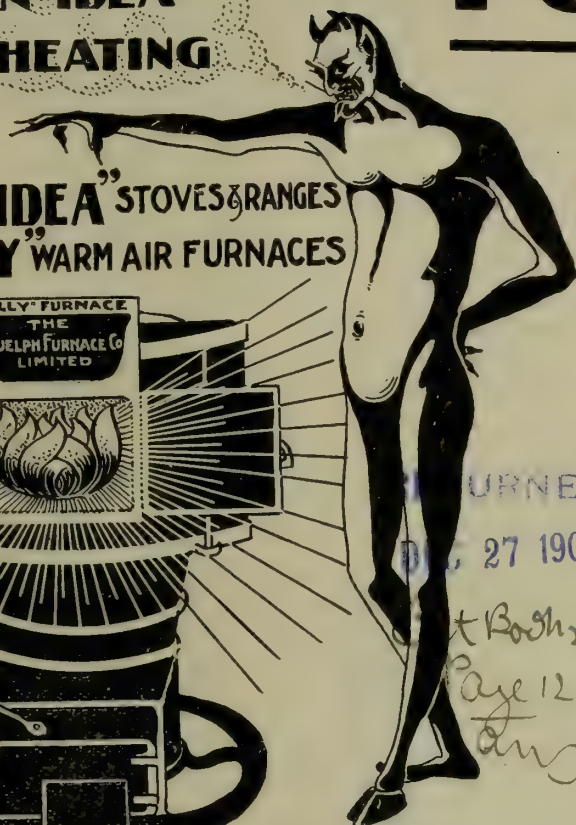
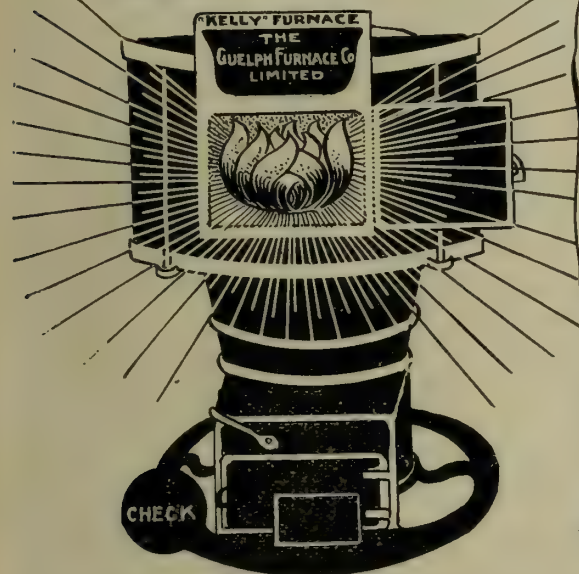
The Heaviest and Best Elbow on the market. Measures 23 inches long at the back. Send in for sample dozen. Polished or Common.

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"NEW IDEA" STOVES & RANGES
"KELLY" WARM AIR FURNACES



FURNACES

An Age of Progress

We are a progressive people living in a progressive age. The laboring man of the year 1904 enjoys comforts that in former years were denied reigning princes and wealthy aristocrats. In no branch is this advance more marked than in the matter of heating houses.

KELLY FURNACES are the best that money can buy, and yet well within the reach of all.

FOR COAL OR WOOD in different sizes.

KELLY FURNACES—The satisfying line.

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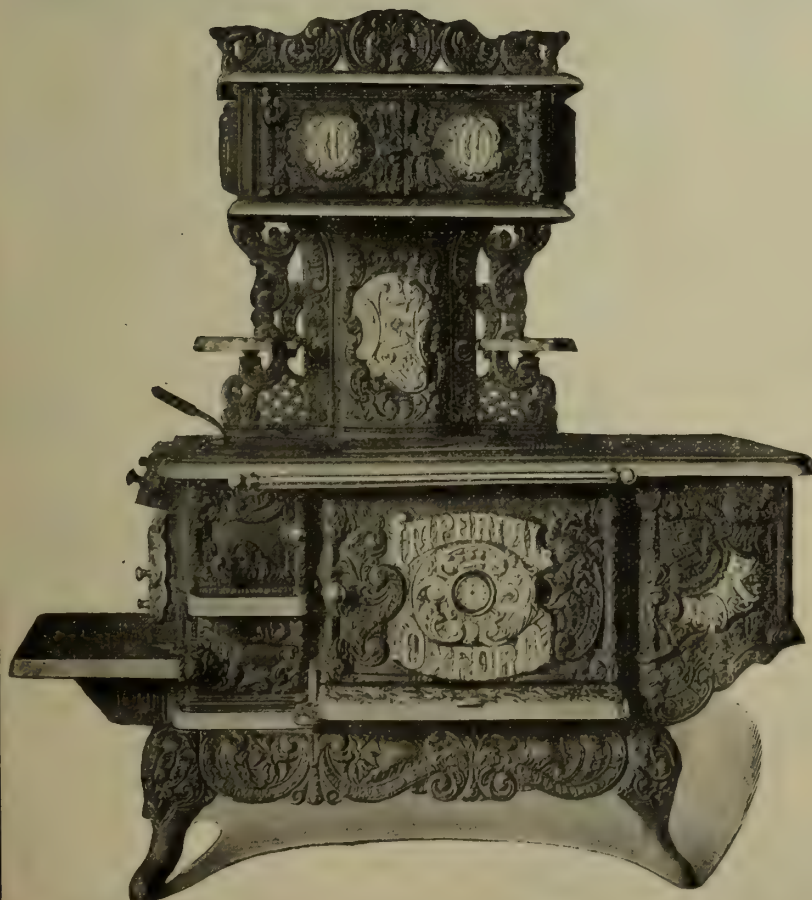
They know its merits and no other range can be "just as good." Because so many people want the Imperial Oxford Range should be reason enough for you to sell them.

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THE GURNEY STANDARD METAL CO., Limited
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Cornices, Metal Ceilings, Sidings and all other Metal building goods.

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Cor. Queen and George Streets,
TORONTO, ONT.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Peterboro Times says that in all probability the Canadian plant of the United States Steel Corporation will be erected in Peterboro. The unlimited electric power available there is said to have been the determining factor, while the Trent Canal was also taken into consideration as an outlet for the products and an inlet for raw material.

The discovery of an extensive nickel-copper deposit at Fort Matachewan on the Montreal River is reported.

The ratepayers of Hespeler, Ont., have voted unanimously for a by-law to loan Clark & Demill, of Galt, \$20,000, to establish their plant there for the manufacture of wood-working machinery.

COMPANIES INCORPORATED.

The Canadian Pipe Co., Limited, Victoria, B. C.; capital, \$25,000; purpose, to take over the Canadian Pipe Co.

Greenwood-Strathmore Mines, Limited, British Columbia; capital, \$600,000; purpose, to operate mining claims in British Columbia.

The Revelstoke Land Co., Limited, British Columbia; capital, \$50,000; purpose, to carry on business of lumber merchants and to operate saw mills.

The Union Lumber Co., Limited, Victoria, B. C.; capital, \$100,000; purpose, to carry on a general mercantile business.

O. Soesy Mfg. Co., Limited, Montreal; capital, \$30,000; purpose, to renovate the exterior and interior of street cars. The directors are all of Montreal.

The Hamelin & Ayers Co., Limited, Lachute, Que.; capital, \$100,000; purpose to manufacture woollen and textile goods.

The Electric Maintenance and Supply Co., Limited, Montreal; capital, \$20,000; purpose, to manufacture and deal in electrical machinery.

Meikle Bros. & Co., Limited, Victoria, B. C.; capital, \$28,000; purpose, to manufacture and deal in mineral and aerated waters.

The Lachute Shuttle Co., Limited, Lachute, Que.; capital, \$50,000; purpose, to carry on a general lumber and woodenware manufacturing business.

The Vancouver Pipe & Foundry Co., Limited, Vancouver, B. C.; capital, \$10,-

000; purpose, to manufacture and deal in soil pipe and fittings and castings of any metal.

The Maple Leaf Ridge Creamery and Fruit Canning Co., Limited, Victoria, B. C.; capital, \$30,000; purpose, to manufacture and sell butter, cheese, and condensed milk, etc.

The Hammond Steam Scraper Co. of Canada, Limited, Victoria, B. C.; purpose, to acquire certain patents of an automatic scraper for excavating, dredging and removing earth, clay, etc.

Canadian Klondike Mining Co., Limited, Windsor, Ont.; capital, \$750,000; purpose, to carry on a general mining business. The directors are: H. B. McGiverin, Ottawa, and others from Detroit.

The Canada Process Co., Limited, Toronto; capital, \$50,000; purpose, to manufacture all kinds of metals, minerals, etc. The directors are: G. L. Sherlock, J. M. Neil and G. H. Campbell, all of Toronto.

The Standard Journal Dust Guard Co., Limited, British Columbia; capital, \$66,000; purpose, to manufacture and sell certain improvements to car axle journal boxes invented by E. E. Sager, Seattle, U. S. A.

The Senator Mill Mfg. Co., Limited, Toronto; capital, \$100,000; purpose, to manufacture and deal in the manufacture of rock ore, quartz, cement, and other refractory substances. The directors are: J. K. Griffin, Wm. St. Clair and J. Ridley, all of Galt.

Barclay-Hodgkins Lumber Co., Limited, Toronto; capital, \$50,000; purpose, to buy, sell and manufacture lumber, timber and timber limits. The directors are: C. A. Barclay, C. S. Barclay, both of Pickering, Ont.; O. Hodgkins and H. Hodgkins, both of Wellandport, Ont.

The Brockville Lumber Co., Limited, Brockville; capital, \$75,000; purpose, to manufacture and sell lumber, hardware, cement and other builders' supplies. The directors are: V. R. Marshall, W. H. Comstock, S. J. Geash and A. A. Fisher, all of Brockville; and E. W. Rathbun, Deseronto.

The Anyun Fuse and Electric Co., Limited, Hamilton; capital, \$10,000; purpose, to manufacture electrical and mechanical supplies of all kinds, and also Anyun oil fuse, fuse boards, etc. The directors are: D. M. Cameron, J. J. Markham, Wm. Shaw, J. A. Baby and G. B. Baby, all of Hamilton.

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RIGHT**
GALVANIZING ONT.
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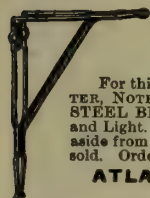
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CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works
"Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

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By R. R. Williams; 576 pages; 6¾ x 10 inches; 660 illustrations; bound in cloth\$3.00

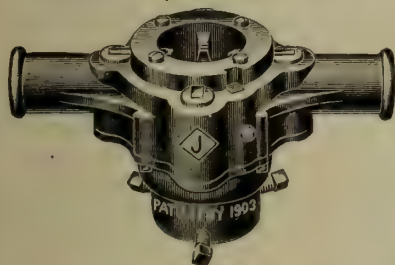
Hardware Store Business Methods.

A series of articles dealing with business methods in the hardware store, by different authors; 227 pages; 5½ x 8 inches; illustrated; cloth binding.....\$1.00

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- An Ash Sifter to retail at 25c.
- One of wire and metal, wood eliminated.
- One that won't come apart; wires won't, can't, become loose.
- The best thing out. Remember, it retails for a quarter.

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Discount to Dealers only.

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Ready Roofing, Sheathing and Black  Diamond Tarred Felts,
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CURRENT MARKET QUOTATIONS.

Oct. 21, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

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56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

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Charcoal Plates—Bright. Per box.
M.L.S., equal to Bradley—
I.C. usual sizes—\$6 50
I.X. " " 8 00
I.X.X. " " 9 50
Famous, equal to Bradley—
I.C. " " 6 75
I.X. " " 8 25
I.X.X. " " 9 75

Raven and Vulture Grades—
I.C. usual sizes—4 25
I.X. " " 5 00
I.X.X. " " 5 75
I.X.X.X. " " 6 50

"Dominion Crown Best"—Double

Coated, Tissue. Per box.
I.C. " " 5 50
I.X. " " 6 50
I.X.X. " " 7 50
I.X.X.X. " " 8 50
Allway's Best—Standard Quality.
I.C. " " 4 50
I.X. " " 5 50
I.X.X. " " 6 50

Bessemer Steel—
I.C. usual size, 14x20—3 35
I.C. special sizes, base—3 60
20x28—7 10

Charcoal Plates—Terne

Dean or J. G. Grade—
I.C., 20x28, 112 sheets—7 50
I.X., Terne Tin—10 50

Cookley Grade—
X.X., 14x36, 50 sheet hxs. }
" 14x60, " }
" 14x65, " } 7 00

Tinned Sheets.

72x30 up to 24 gauge—7 25 7 50
" 26—7 75 8 00

IRON AND STEEL.

Common bar, per 100 lb.—1 80
Refined "—2 20
Horseshoe Iron—2 25
Hoop steel, 1 1/2 to 3-in. base—2 75
Sleigh shoe steel—2 10
Tire steel—2 30
T. Firth & Co.'s tool steel, per lb 0 12 1/2 0 13
B. K. Morton & Co.—
" Alpha tool steel—0 70
" M. Self-Hardening—0 60
" J. Standard—0 14
Classes high speed steel—0 60
" standard tool steel—0 14
" crucible steel—0 14
" Chas. Leonard's tool—0 08 0 09

Crucible Steel Co.
" Black Diamond—0 10 0 11
" Silver steel—0 13
" Special—0 17
" Rex high speed steel—0 65 0 75
" Self-Hardening—0 45 0 50
Sanderson's Crucible Tool—0 08 0 09
" Superior—0 12 0 13
" Extra And—0 15
" Self-Hardening—0 45 0 50
" Rex high speed—0 65 0 75
Jonas & Colver's tool steel—0 10 0 20
" Air Hardening—0 70
Drill steel, per lb—0 08 0 10

BABBIT METAL.

"Tandem," A—per lb. 0 27
" B—0 21
" C—0 11 1/2
Frictionless Metal—0 23

Syracuse Smelting Works:

Aluminum, genuine—0 45
Government—0 44
Tough—0 40
Hard—0 40
Dynamo—0 30
Special—0 25
Harmony—0 22
Car Box—0 20
Extra—0 15

The Canada Metal Co.:

Imperial, genuine—0 40
Metallic—0 30
Hercules—0 20
Star—0 15
No. 1—0 12
No. 2—0 10
No. 3—0 08
No. 4—0 05

Geo. Langwell & Son.

No. 1—0 08
No. 2—0 07
No. 3—0 05 1/2
Extra—0 09 1/2

BLACK SHEETS.

	Montreal	Toronto
10 and 16 gauge	2 25	2 50
18 gauge	2 30	2 50
20	2 30	2 50
22 to 24 gauge	2 35	2 70
26	2 40	2 80
28	2 40	2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary—2 40
All bright—3 30
Galvanized Canada Plates—

Ordinary. Dom.

	Crown.
18x24x52	4 25
" 60	4 35
20x28x80	8 50
" 94	9 00

GALVANIZED SHEETS.

Fleur-de-Lis, Gordon Crown, Comet Bell Head
16 gauge—3 65
18 to 24 gauge—3 75 3 50 3 75 3 50
26 " 4 00 3 75 3 90 3 75
28 " 4 25 4 00 4 05 4 00
American brands, \$4.00 for 10 1/2 oz.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 5-16 " " 5 60
" 7-16 " " 4 45
" 9-16 " " 3 85
" 11-16 " " 3 70
" 13-16 " " 3 55
" 15-16 " " 3 45
" 17-16 " " 3 35
" 19-16 " " 3 25
Halter, kennel and post chains, 40 to 40 and
5 per cent.
Cow ties—40 p.c.
Tie out chains—65 p.c.
Stall fixtures—35 p.c.
Trace chain—45 p.c.
Jack chain, iron, single and double, discount
35 p.c.
Jack chain, brass, single and double, dis-
count 40 p.c.

COPPER.

	Ingot.	Per 100 lb.
Casting, car lots—	13 75	
Bars—		
Cut lengths, round, 1/2 to 1 in.	21 00	23 00
" round and square, 1 to 2 inches—	21	23 00

Sheet.
Plain, 16 oz., 14x48 and 14x60—20 00
Plain, 14 oz.—21 00
Tinned copper sheet—24 00
Planished—32 00

Braziers' (in sheets).

4x6 ft., 25 to 30 lb. each, per lb.—0 22
" 35 to 45 " " 0 21
" 50-lb. and above " 0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb—0 28
Spun, per lb—0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4—0 23
Tubing, base, per lb—0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb—6 00 6 25
Domestic—5 50 5 75

ZINC SHEET.

5-cwt. casks—6 25 6 50
Part casks—6 50 7 00

LEAD.

Imported Pig, per 100 lb—3 20
Bar, per lb—0 05
Sheets, 23 lb. sq. ft., by roll—0 06 1/2
Sheets, 3 to 6 lb—0 06

NOTE.—Cut sheets 10c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's—per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count 17 1/2 p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.

Zinc—6 00
Copper, discount 20 per cent. off revised list.

BATHS.

Standard Ideal Enameled—
5 1/2 ft. 2 1/2 in. rolled rim, 1st quality—21 25
5 1/2 ft. " 2nd "—17 25

CLOSETS.

Fittings—Net.
Plain Simplex Syphon Jet—9 00
Emb.—9 50
Fittings—1 25

Low Down Elgin or Feutonic, plain—
Low emb.—6 50
Connection—1 25
Plain Richelieu—4 25
Emb.—4 50

Connections—1 25
Basins, P.O., 14-in.—0 63
Basins, oval, 17 x 14-in.—1 50
Basins, " 19 x 15-in.—2 00

IRON PIPE.

Black pipe—Per 100 feet.
1 inch—1 97
2 1/2 "—2 15
3 "—2 28
4 "—2 86
5 "—4 10
6 "—5 62
8 "—6 72
10 "—8 98

Galvanized pipe—
1 inch—1 97
2 1/2 "—2 15
3 "—2 28
4 "—2 86
5 "—4 10
6 "—5 62
8 "—6 72
10 "—8 98

Standard Compression work, dia. 40 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra dis-
count 10 per cent.

Lever handle Stops and Waste, discount 60
per cent. With in lots of 2 dozen and over,
an extra discount of 10 per cent.

J.M.T. Globe, Angle and Check Valves, dis-
count 55 per cent.

Standard Globe, Angle and Check Valves,
discount 65 per cent.

Kerr's special standard globes and angles,
discount 60 per cent.

Kerr's Jenkin disc, copper-alloy disc and
heavy standard valves, discount 60 per cent.

Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator
valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radia-
tor valves, discount 70 per cent.

Kerr's quick-opening hot-water radiator
valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate
valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate
valves, I.B.B.M., discount 70 per cent.

J.M.T. Radiator Valves, discount 55 per cent.
Standard Radiator Valves, discount 65 per cent.

Patent Quick-Opening Valves, discount 70
per cent.

No. 1 compression bath cock—net 1 75
No. 4 " " " " 1 90
No. 7 Fuller's " " " 2 10
No. 14 " " " 2 25
Patent Compression Cushion, basin
cock, hot and cold—per doz. 15 00
Patent Compression Cushion, bath
cock, No. 2208—2 25
Square head brass cocks, discount 55 percent
iron " 50 to 60 " 2 50
Thompson Smoke-test Machine \$25.00

RANGE BOILERS.
Copper, 30 gallon—22 00
" 35 " " 24 00
" 40 " " 28 00
Discount off copper boilers 15 per cent.

SOLD PIPE AND FITTINGS.
Light soil pipe, discount, 50 per cent.
" fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60
per cent.
and 8-in. pipe, discount 40 and 5 per cent.

SOLDER. Per lb.
Bar, half-and-half, guaranteed—0 10
Bar, half-and-half, commercial—0 17

WRENCHES.
Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 20 to 25 per cent.
Towers' Engineer—each 2 00 7 00
" S—per doz. 5 80 6 00
G. & K.'s Pipe—each 3 40
Burrell's Pipe—each 1 80
Pocket—per doz. 6 25 2 50

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity 3c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs.	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD. Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt \$4 25	\$4 50
Genuine, 100 lb. kegs	4 75
No. 1, 560 lb. casks, per cwt	4 00
No. 1, 100 lb. kegs, per cwt	4 25

WHITE ZINC.

Extra Red Seal	0 06
French V. M.	0 06
Lehigh	0 06

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis Frost Co.'s "Ark" 24	1 25
"British Navy dock	1 50
Henderson & Potts' "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in kegs, boxes or loose	1 70
25-lb. tins	1 85
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
"No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
"orange	2 50	2 60
Furpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
"No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granitine floor finish, per gal.	2 75	
Maple Leaf coach enamels; size 1,	\$1.20;	
size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, assorted		
case, from	to 1 gal., \$2.50.	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner	0 18	0 20
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
American \$2.00 per 1000.	
C. B. Caps American, \$2.60 per 1000.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, Amer-	
ican, add 20 per cent. to list. B. B. Caps,	
discount 40 per cent., American.	
Central Fire Pistol and Rifle, list net Amer-	
ican, 30 per cent.	
Central Fire Cartridges, pistol sizes, Dominion,	
30 per cent.	
Central Fire Cartridges, Sporting and Military,	
Dominion, 15 per cent. American	
10 per cent. advance on list.	
Loaded "empty Shells, "Trap" and	
"Dominion" grades, 25 per cent. discount.	
American 20 per cent. discount. Rival	
and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

	per lb.
Best thick brown or grey felt wads, in	
1-lb. bags	\$0 70
Best thick white card wads, in boxes	
of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes	
of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each,	
12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000	
each, 10 gauge	0 25
Chemically prepared black edge grey	
cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink	
edge, best white cloth wads, in	
boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.

Woodyatt Hudson, per doz., net	4 50
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AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.	
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AXES.

Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit, " "	10 00 18 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50 6 00
Boys' Axes	6 25 7 00
Splitting Axes	7 00 12 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.	
Red Ridge, boys', handled	5 75
"hunters"	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.

Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.

Brass, 60 per cent.	
Nickel, 55 per cent.	
American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

DOOR.

Gongs, Sargent's	5 50 8 00
Peterboro', discount 50 and 10	
per cent. off new list.	
Farm.	

HOUSE.

American, each	1 25 3 00
American, per lb.	0 35 0 40

BELLOWS.

Hand, per doz.	3 35 4 75
Moulders', per doz.	7 50 10 00
Blacksmiths', discount 40 per cent.	

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per	
cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITS.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

CAR.

Gilmour's, 47½ per cent.	
Clark's, 40 per cent.	
Clark's, per doz	0 65 0 90
Diamond, Shell, per doz	1 00 1 50
Nail and Spike, per gross	2 25 5 20

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½ 0 12
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BOLTS AND NUTS.

Carriage Bolts, common (\$1 list)	
" " " 3-16 and ½	60 and 10
" " " 5-16 and ¾	55 and 5
" " " 7-16 and up	55 and 5
" " " full sq. (\$2.40 list)	60
" " " Norway Iron (\$3	60
list)	
Machine Bolts, all sizes, ½ and	
less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4½c. per lb. off.	
Stove Rods, per lb., ½ to 6c.	

BOOT CALKS.

Small and medium, ball	per M. 4 25
Small heel	4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.	
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BUTCHERS' CLEAVERS.

German	per doz. 6 00	9 00
American	" 12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz. 0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb.	
per roll	0 90
Ready roofing, 3-ply, not under 65 lb.	
per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 600 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof	small packages " 0 25
Refined Tar	per barrel 5 00
Coal Tar	per gal. 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 00

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90	or 2-inch.
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BUTTS.

Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 60 per cent.	

WROUGHT STEEL.

Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. B ronzed	per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz. 1 00	1 50
Bullard's	" 6 50	

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross 7 50	8 50
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CHALK.

Carpenters' Colored, per gross	0 45 0 75
White lump	per cwt. 0 80 0 85
Red	per cwt. 0 05 0 06
Crayon	per gross 0 14 0 18

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,	
per doz \$4 00	
" " " 25c. pkgs.,	2 00
" " " 10c.	75
" " " 25-lb. pall, each	1 80
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz.	1 25
Worm	1 25
International 1 Stock Foods, \$1 packages,	
per doz.	8 00
International Stock Foods, per pall	2 75
" " " per bbl.	10 50
" Poultry " \$1 pkgs. per doz.	8 00
" Worm Powders, 50c. pkgs.	4 00
" Pine Healing Oil, per doz	8 00
" Pheno-Chloro, \$1 pkgs., per doz	8 00
" Hoof Ointment	8 00
" Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at	
4 per doz	

CLOTHES REELS.

Davis Clothes Reels, dis. 40 per cent.	
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An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.		
Plain or Corrugated.		
2-inch	per 100 feet	3 00
3 "	" "	4 00
4 "	" "	5 25
5 "	" "	6 75
6 "	" "	9 00

CRADLES, GRAIN.		
Canadian, discount 20 to 25 per cent.		

CROSSCUT SAW HANDLES.		
S. & D., No. 3	per pair	0 17 1/2
S. & D., " 5	" "	0 22 1/2
S. & D., " 6	" "	0 15
Boynton pattern	" "	0 20

DOOR SPRINGS.		
Torrey's Rod	per doz.	1 85
Coll. 9 to 11 in.	" "	0 95 1 85
English	" "	2 00 4 00

DRAW KNIVES.		
Coach and Wagon, discount 50 per cent.		
Carpenters' discount 60 and 10 per cent.		

DRILLS.		
Hand and Breast.		
Miller's Falls, per doz., net list.		

DRILL BITS.		
Storse, discount 37 1/2 to 40 per cent.		
Standard, discount 50 and 5 to 55 per cent.		

FAUCETS.		
Common, cork-lined, discount 35 per cent.		

EAVETROUGHES.		
10-inch	per 100 ft.	10 00

ELBOWS (stovepipe.)		
5 and 6-inch, common	per doz.	1 20
7-inch	" "	1 35
Polished, 15c. per dozen extra.		

ESCUTCHEONS.		
Discount 50 and 10 per cent., new list		

ESCUTCHEON PINS.		
Iron, discount 40 per cent.		

FACTORY MILK CANS.		
Discount off revised list, 40 per cent.		

FILES AND RASPS.		
Great Western	70 and 10 per cent.	
Arcade	" "	
Kearney & Foot	" "	
Dixon's	" "	
American	" "	
J. Barton Smith	" "	
McClellan	" "	
Eagle	" "	
Nicholson, 60 and 10 to 60, 10 and 5	" "	
Royal	" "	
Globe	" "	
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.		
Jawitt's, English list, 25 to 27 1/2 per cent.		
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50		

GLASS.		
Window. Box Price.		
Size United	Per	D. Diamond
Inches.	50 ft.	Per 50 ft.
Under 26	3 80	5 06
26 to 40	4 00	5 44
41 to 50	4 50	6 56
51 to 60	4 75	7 50
61 to 70	5 00	8 62
71 to 80	5 30	9 38
81 to 85	" "	10 75
86 to 90	" "	12 30
91 to 95	" "	15 00
96 to 100	" "	18 00

GAUGES.		
Marking, Mortise, Etc.		
Stanley's, discount 50 to 55 per cent.		
Wire Gauges.		
Winn's, Nos. 26 to 33	each	1 65 2 40
GILLET'S POWDERED LYE.		
1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.		

HALTERS.		
Rope, 1/2-inch	per gross	9 00
Rope, 3/4 "	" "	12 00
Rope, 1 "	" "	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1 1/2 "	" "	5 20
Web	" "	2 45

HAMMERS.		
Nail.		
Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27 1/2 per cent.		

Tack.		
Magnetic	per doz.	1 10 1 20

Sledge.		
Canadian	per lb.	0 07 1/2 0 08 1/2

Ball Pean.		
English and Canadian, per lb.		0 22 0 25

HANDLES.		
Axe, 2nd growth, per doz. net		3 00 4 00
Store door	per doz.	1 00 1 50

Fork.		
C. & B., discount 40 per cent., revised list.		

Hoe.		
C. & B., discount 40 per cent., revised list.		

Saw.		
American	per doz.	1 00 1 25

Plane.		
American	per gross	3 15 3 75

Hammer and Hatchet.		
Canadian, discount 40 per cent.		

HANGERS.		
doz. pairs.		
Steel barn door		8 00 10 00
Stearns, 4-inch		4 50
" 5-inch		6 00
Zenith		9 00

Lane's covered—		
No. 11, 5-foot run		8 40
No. 11 1/2, 10-foot run		10 80
No. 12, 10-foot run		12 60
No. 14, 15-foot run		21 00
Steel, covered		4 00 11 00
" track, 1 x 3-16 in (100 ft)		3 75
" " 1 1/2 x 3-16 in (100 ft)		4 75

HARVEST TOOLS.		
Discount 60 per cent.		

HATCHETS.		
Canadian, discount 40 to 42 1/2 per cent.		
Shingle, Red Ridge 1, per doz.		4 40
" 2, "		4 85
Barrel, Underhill		5 00

HAT ENAMEL.		
Henderson & Potts' "Anchor Brand"		

HINGES.		
Blind, Parker's, discount 60 per cent.		
Heavy T and strap, 4-in., per lb.		0 06 1/2
" 5-in., "		0 06 1/2
" 6-in., "		0 06
" 8-in., "		0 05 1/2
" 10-in., "		0 05 1/2
Light T and strap, discount 65 and 5 per cent.		
Screw hook and hinge	per 100 lb.	4 50
12-in. up	" "	3 25
Spring, No. 20, per gro. pairs		10 50
Spring, Woodyatt pattern, per gro., No. 5, \$17.50; No. 10, \$18; No. 20, \$10.80; No. 120, \$20; No. 51, \$10; No. 50, \$27.50.		

HOES.		
Garden, Mortar, etc., discount 60 per cent.		
Planter	per doz.	4 00 4 50

HOLLOW WARE.		
Tinned cast, 35 per cent.		

HOOKS.		
Cast Iron.		
Bird cage	per doz.	0 50 1 10

Clothes line, No. 61	" "	0 00 0 70
Harness	" "	0 60 12 00
Hat and coat	per gro.	1 10 10 00
Chandelier	per doz.	0 50 1 00

Wrought Iron.		
Wrought hooks and staples	Canadian dis-	
count 60 per cent.		

Wire.		
Hat and coat, discount 60 per cent.		
Belt	per 1,000	0 60
Scrow, bright, discount 60 per cent.		

HORSE NAILS.		
"P. B." Brand, 55 to 57 1/2 per cent.		
"C" brand, 40, 10 and 7 1/2 per cent. off list (Oval head)		
"M" brand, 55, per cent.		
Countersunk, 57 1/2 per cent.		
"Monarch," 50 and 7 1/2 per cent.		
"Peerless," 50 per cent. dis.		

HORSESHOES.		
F.O.B. Montreal		
No. 2	No. 1	
and	and	
larger	smaller	
3 65	3 90	
3 90	4 15	

Steel Shoes.		
XL, sizes 1 to 5		5 35
Light, No. 2 and larger		3 80
No. 1 and smaller		4 05
Featherweight, all sizes 0 to 4		5 35
Toeweight, all sizes 1 to 4		6 69

JAPANNED WARE.		
50 per cent.		

PICKS.		
Star	per doz.	3 00 3 25

KETTLES.		
Brass spun 7 1/2 per cent. discount off new list.		
Copper	per lb.	0 30 0 50
American, 60 and 10 to 65 and 5 per cent.		

KEYS.		
Lock, Canadian dis. 40 to 40 and 10 per cent.		
Cabinet, trunk and padlock, American	per gross	0 60

KNIVES.		
Door, japanned and N.P., per doz.		1 50 2 50
Bronze, Berlin	per doz.	2 75 3 25
Bronze, Genuine	" "	6 00 9 00
Shutter, porcelain, F. & L. screw	per gross	1 30 2 00
White door knobs	per doz.	2 00

HAY KNIVES.		
Net prices.		

LAMP WICKS.		
Discount, 60 per cent.		

LADDERS, EXTENSION.		
Wagoner Extension Ladders, dis. 40 per cent.		

LANTERNS.		
Cold Blast	per doz.	7 00
No. 3, "Wright's"	" "	8 50
Ordinary, with O burner	" "	4 00
Dashboard, cold blast	" "	9 00
No. 0	" "	5 75
Japanning, 50c. per doz. extra.		

LEMON SQUEEZERS.		
Porcelain lined	per doz.	2 20 5 60
Galvanized	" "	1 87 3 85
King, wood	" "	2 75 2 90
King, glass	" "	4 00 4 50
All glass	" "	0 50 0 90

LAWN MOWERS FOR 1905.		
Woodyatt, 10 1/2-in., 14-in. cut	\$ 8 50 to \$11 00	
Star, " 9-in.	6 00 to 6 50	
Daisy, " 8-in.	5 25 to 5 75	
Philadelphia, 7 1/2-in.	6 00 to 7 50	
Woodyatt, 10 1/2-in., ball bearing	13 25 to 18 00	
Grass Boxes	1 75 to 2 00	
King Edward, 12-in., 14-in. cut	9 00 to 10 00	
Horse Lawn Mowers, "Special,"		
Discount, 50 per cent., with freight concessions in quantity shipments.		

Maxwell & Sons:		
10 1/2-in. high wheel	7 50 10 00	
9-in.	5 50 6 25	
8-in.	4 90 5 50	
Discount 50 per cent.		

LOCKS.		
Canadian, 50 to 50 and 10 per cent.		
Russell & Erwin	per doz.	

Cabinet.		
Eagle, discount 30 per cent.		

Padlocks.		
English and Am.	per doz.	0 50 6 00
Eagle, discount 20 to 25 per cent.		

MACHINE SCREWS.		
Iron and Brass.		
Flat head, discount 25 per cent.		
Round head, discount 20 per cent.		

MALLET.		
Tinsmiths'	per doz.	1 25 1 50
Carpenters', hickory, "	" "	1 25 3 75
Lignum Vitae	" "	3 45 5 00
Caulking, each	" "	0 60 2 00

MATTOCKS.		
Canadian	per doz.	5 50 6 00

MEAT CUTTERS.		
American, discount 3 1/2 per cent.		
German, 15 per cent		
Gem	each	1 15

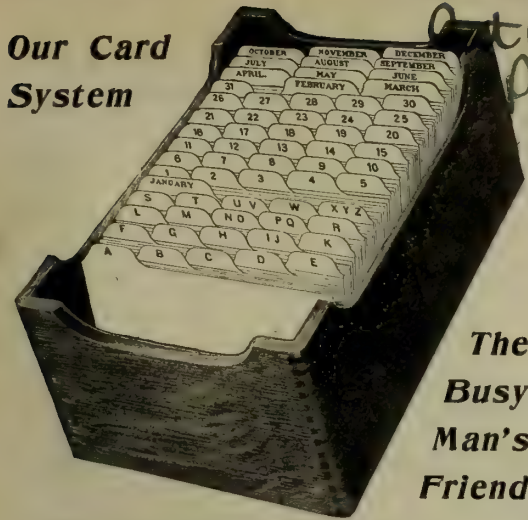
MILK CAN TRIMMINGS.		
Discount 25 per cent.		

NAILS.		
Cut. Wire.		
2d and 3d		3 30 3 45
3d		2 95 3 12
4 and 5d		2 70 2 85
6 and 7d		2 60 2 80
8 and 9d		2 45 2 60
10 and 12d		2 40 2 55
16 and 20d		2 35 2 50
30, 40, 50 and 60d (base)		2 30 2 45
Cut nails in carlots 5c. less.		
Wire nails in carlots are \$2.40.		
Steel cut nails 10c. extra.		
Miscellaneous wire nails, discount 75 per cent.		
Coopers' nails, discount 30 per cent.		

NAIL PULLERS.		
German and American		1 75 2 50

October 22, 1904

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The Business Getter of the XXth Century

This wonderful Office Labor Saving Device has filled the vacancy that for so long could not be furnished. Simple, quick, accurate, it cannot be equalled for keeping stock, cost, follow up systems, etc. Be up-to-date and take advantage of what we have provided, and **save time, trouble and thought.** Information classified so it may be found instantly. **Write now.**

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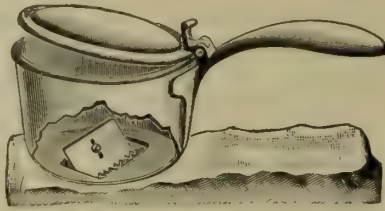
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PLANE IRONS.		SAP SPOUTS.		STAPLES.		ENAMELLED WARE.	
English	per doz. 2 00 5 00	Bronzed iron with hooks	per 1,000 7 50	Galvanized	3 00	White, Princess, Turquoise, Blue and White	discount 50 per cent.
PLIERS AND NIPPERS.		"Eureka" tinned steel, hooks	8 00	Plain	2 80	Diamond, Famous, Premier, discount 50 and	10 per cent.
Button's genuine,	per doz. pairs, discount	SAWS.		Coopers', discount 45 per cent.		Granite or Pearl, Imperial, Crescent, discount	50, 10 and 10 per cent.
37 1/2 to 40 per cent.		Hand, Diaston's, discount 12 1/2 per cent		Poultry netting staples, discount 40 per cent.		Premier steel ware, 40 per cent.	
Button's imitation	per doz. 5 00 9 00	S. & D., discount 40 per cent.		STOCKS AND DIES.		"Star" decorated steel and decorated white,	25 per cent.
German	0 60 0 60	Crosscut, Diaston's...per foot 0 35 0 55		American discount 25 per cent.		WIRE.	
PRESSED SPIKES.		S. & D., discount 35 per cent. on Nos. 2 and 3.		STONE.		Smooth Steel Wire.	
Discount 20 per cent.		Hack, complete...each 0 75 2 75		Washita	0 28 0 60	No. 0-9 gauge	\$2 50
PULLEYS.		" frame only...each 0 50 1 25		Hindostan	0 06 0 07	10 "	60. extra.
Hothouse	per doz. 0 55 1 00	SASH WEIGHTS.		Labrador slip	0 09 0 09	11 "	120. "
Axle	0 22 0 33	Sectional...per 100 lb. 2 00 2 25		" Axle	0 15 0 15	12 "	200. "
Screw	0 27 1 00	Solid	1 50 1 75	Turkey	0 50 0 50	13 "	300. "
Awning	0 35 2 50	SASH CORD.		Arkansas	1 50 1 50	14 "	400. "
PUMPS.		Per lb.	0 28 0 30	Water-of-Ayr	0 10 0 10	15 "	550. "
Canadian cistern	1 80 3 60	SAW SETS.		Scythe	3 50 5 00	16 "	700. "
Canadian pitcher spout	1 40 2 10	Lincoln and Whiting	4 75	Grind, 2-in., 40 to 200 lb., per ton	25 00	ADD 60c. for coppering and \$2 for tinning.	
PUNCHES.		Hand Sets, Perfect	4 00	" under 40 lb.,	28 00	Extra net per 100 lb.—Oiled wire 10c.,	
Saddler's	per doz. 1 00 1 85	X-Cut Sets,	7 50	" under 2 in. thick,	29 00	spring wire \$1.25, special hay baling wire 30c.,	
Conductor's	3 00 15 00	SCALES.		STOVEPIPES.		best steel wire 75c., bright soft drawn 15c.,	
Finers, solid	0 72	Gurney Standard, 40 per cent.		5 and 6 inch, per 100 lengths	7 00	charcoal (extra quality) \$1.25, packed in cases	
" hollow	per inch 1 00	Gurney Champion, 50 per cent.		7 inch	7 50	or cases 15c., bagging and packing 10c. 50	
RAKES.		Burrow, Stewart & Milne		ENAMELINE STOVE POLISH.		and 100-lb. bundles 10c., in 25-lb. bundles	
Wood	per doz. net 1 20 up.	Imperial Standard, discount 40 per cent.		No. 4, 3 doz. in case, net cash	4 80	15c., in 5 and 10-lb. bundles 25c., in 1-lb.	
RAZORS.		Champion Scales, discount 50 per cent.		No. 6, 3 doz. in case	8 40	hanks, 50c., in 1-lb. hanks 75c., in 1-lb.	
Elliot's	4 00 18 00	Fairbanks standard, discount 35 per cent.		TACKS, BRADS, ETC.		hanks \$1.	
Geo. Butler's & Co.'s	4 00 18 00	" Dominion, discount 55 per cent.		Carpet tacks, blued	80 and 15	Fine Steel Wire, discount 25 per cent.	
Boker's	7 50 11 00	Richelieu, discount 55 per cent.		" tinned	80 and 20	List of extras: In 100-lb. lots: No. 17,	
" King Cutter	12 50 15 00	Warren's new Standard, discount 40 per cent.		" (in kegs)	40	\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—	
Wade & Butcher's	3 60 10 00	" Champion, discount 50 per cent.		Cut tacks, blued, in dozens only	60	No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.	
Theile & Quack's	7 00 12 00	Weightbeams, discount 35 per cent.		1/2 weights	60	24, \$8—No. 25, \$9—No. 26, \$9.50—No. 27,	
Carbo Magnetic	15 00	SCREW DRIVERS.		Swedes cut tacks, blued and tinned—	80 and 10	\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—	
Griffin Barber's Favorite	10 75	Sargent's	per doz. 0 65 1 00	In bulk	80 and 10	No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,	
Griffin No. 65	13 00	SCREEN DOORS.		In dozens	75	\$17. Extras net—tinned wire, Nos. 17-25,	
Griffin Safety Razors	13 50	Common doors, 2 or 3 panel, walnut		Swedes, upholsterers', bulk	85, 12 1/2 and 12 1/2	\$2—Nos. 26-31, \$4—Nos. 32-34, \$5 Coppered,	
Griffin Stropping Machines	13 50	stained, 4-in. style	6 50	brush, blued and tinned	70	5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5	
Lewis Bros "Klean Kutter"	8 50 10 50	Common doors, 2 or 3 panel, yellow and		Swedes cut tacks, blued and tinned—	80 and 10	and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.	
Clauss, 50 and 10 per cent.		green stained, 4-in. style	6 75	Chair nails, blued	65 and 5	—in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—	
Clauss Strops, 50 and 10 per cent.		Common doors, 2 or 3 panel, in natural		Clout nails, blued	65 and 10	packed in cases or cases, 15c.—bagging or	
REGISTERS.		colors, oil finish	6 75	Clout nails, blued	65 and 5	papery, 10c.	
Discount 40 per cent.		3-in. style 20c. per dozen less.		Patent brads	40	Brass wire, discount 60 per cent. off the list.	
RIVETS AND BURNS.		SCREENS.		Patent brads	40	Copper wire, discount 60 per cent. net cash	
Iron Rivets, black and tinned, 60 and 10 p. a.		Wood, F. H., bright and steel, discount 87 1/2		Finishing	40	30 days, f.o.b. factory	
Iron Burns, discount 55 per cent.		per cent.		Lining tacks, in papers	10	Galvanized wire, per 100 lb.—Nos. 4 and 5	
Extras on Iron Rivets in 1-lb. cartons, 1c.		Wood, E. H., brass, dis. 80 per cent.		" in bulk	15	\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15	
per lb.		" R. H., dis. 75 per cent.		" solid heads, in bulk	75	—No. 9, \$2.55—No. 10, \$3.20 to \$3.20	
Extras on Iron Rivets in 1/2-lb. cartons, 1c.		" R. H., bronze, dis. 75 per cent.		Saddle nail, in papers	10	—No. 11, \$3.25 to \$3.25—No. 12, \$2.65	
per lb.		" R. H., dis. 70 per cent.		in bulk	15	—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.	
Copper Rivets, with usual proportion burrs, 45		Drive Screws, dis. 87 1/2 per cent.		TAPE LINES.		15, \$4.30—No. 16, \$4.30. Base sizes, Nos.	
per cent. Cartons, 1c. per lb. extra, net.		Bench, wood	per doz. 3 25 4 00	English, ass skin	per doz. 2 75 5 00	6 to 9, \$2.27 1/2 f.o.b. Cleveland. In carlots	
Copper Burrs only, discount 30 and 10 per cent.		" iron	4 25 5 00	English, Patent Leather	5 50 9 75	120c. less.	
Extras on Tinned or Coppered Rivets, 1/2-lb.		Set, case hardened, dis. 60 per cent.		Chesterman's	each 0 90 2 85	Clothes Line Wire, regular 7 strand, No. 17,	
cartons, 1c. per lb.		Square Cap, dis. 50 and 5 per cent.		" steel	each 0 80 8 00	\$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow	
RIVET SETS.		Hexagon Cap, dis. 45 per cent.		TINNERS' SNIPS.		6 strand, No. 17, \$4.30; No. 18, \$2.70; No.	
Canadian, discount 35 to 37 1/2 per cent.		SCYTHES.		Per doz. net	3 00 15 00	19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,	
ROPE, ETC.		Per doz. net	6 00 9 00	TRAPS (steel.)		Toronto, Montreal.	
Sisal	0 11	SCYTHE SNATHS.		Game, Newhouse, discount 25 per cent.		WIRE FENCING.	
Pure Manila	0 14 1/2	Canadian, discount 40 per cent.		Game, H. & N., P. S. & W., 65 per cent.		Galvanized barb	2 75
"British" Manila	0 11 1/2	SHKARS.		Game, steel, 72 1/2, 75 per cent.		Galvanized, plain twist	2 75
Cotton, 3-16 inch and larger	0 21 0 22	Clauss, nickel, discount 40 per cent.		TROWELS.		Galvanized barb, f.o.b. Cleveland, \$2 55 1/2 in	
" 5-32 inch	0 25 0 27	Clauss, Japan, discount 67 1/2 per cent.		Disston's, discount 10 per cent.		less than carlots, and \$2 45 in carlots.	
" 1 inch	0 25 0 28	Clauss, tailors, discount 40 per cent.		German	per doz. 4 75 6 00	COILED SPRING WIRE.	
Russia Deep Sea	0 16	Seymour's, discount 50 and 10 per cent.		S. & D., discount 35 per cent.		" No. 11	3 35
Jute	0 09	SHOVELS AND SPADES.		TWINS.		" No. 12	3 85
Lath Yarn, single	0 10	Canadian, discount 45 per cent.		Bag, Russian	per lb. 0 27	WIRE CLOTH.	
" double	0 10 1/2	SINKS.		Wrapping, cotton, 3-ply	0 24	Painted Screen, per 100 sq. ft., net.	1 50
Sisal bed cord, 48 feet	0 65	Cast iron, 16 x 24	0 85	4-ply	0 27	Terms, 2 per cent. off 30 days.	
" 60 feet	0 80	" 18 x 30	1 00	Mattress	per lb. 0 33 0 45	WASHING MACHINES.	
" 72 feet	0 95	" 18 x 36	1 40	Staging	0 27 0 35	Round, re-acting per doz.	56 00
RULES.		SNAPS.		WRINGERS.		Square	69 00
Boxwood, discount 55 per cent.		Harness, German, discount 25 per cent.		Leader	per doz. 30 00 33 00	Eclipse, per doz	48 00
Ivory, discount 37 1/2 to 40 per cent.		Lock, Andrews	4 50 11 50	Royal Canadian	" 24 00	Dowell	36 00
SAD IRONS.		SOLDERING IRONS.		Royal American	" 24 00	New Century, per doz	33 00
Mrs. Potts, No. 55, polished	per set 0 80	1, 1 1/2-lb.	per lb. 0 37	Saw Vise	4 50 9 00	Connor Improved	48 00
" No. 50, nickle-plated,	0 90	2-lb. or over	0 34	WISERS.		Daisy	48 00
Common, plain	4 50	Iron, No. 493	per doz. 2 40 2 55	Wright's	0 134	WROUGHT IRON WASHERS.	
" plated	5 50	" No. 494	3 25 3 40	Brook's	0 122	Canadian make, discount 40 per cent.	
SAND AND EMERY PAPER.		Steel, discount 60 to 60 and 5 per cent.		Pipe Vise, Hinge, No. 1	3 50	WROUGHT IRON WASHERS.	
S. & A. sand, discount, 40 and 5 per cent		Try and Bevel, discount 50 to 52 1/2 per cent.		" No. 2	4 50 9 00	WROUGHT IRON WASHERS.	
Emery, discount 40 per cent.		STAMPED WARE.		WROUGHT IRON WASHERS.		WROUGHT IRON WASHERS.	
Garnet (Rutons) 5 to 10 per cent. advance		Plain, discount 75 and 12 1/2 per cent. off re-		Blacksmiths' (discount) 60 per cent.		WROUGHT IRON WASHERS.	
on Mat.		vised list.		parallel (discount) 45 per cent.		WROUGHT IRON WASHERS.	
		Retained, discount 75 per cent. off revised list.				WROUGHT IRON WASHERS.	

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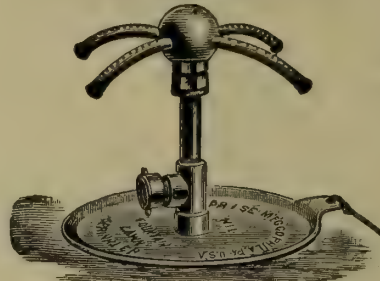
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For Shaving Ice, Coarse or Fine.



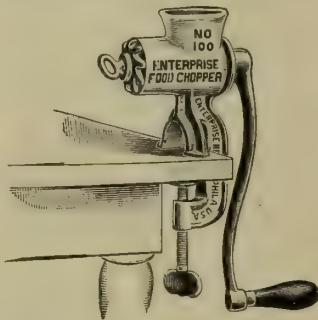
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No. 33, Tinned, - \$6.00
No. 34, Nickerled, - 15.00

LAWN SPRINKLER



No. 1, - - \$3.50

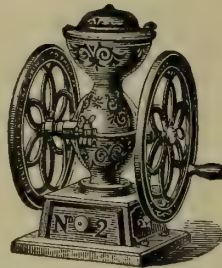
FOOD CHOPPERS



No. 100 - \$1.50
No. 300 - 2.25

Rapid Grinding and Pulverizing Mills

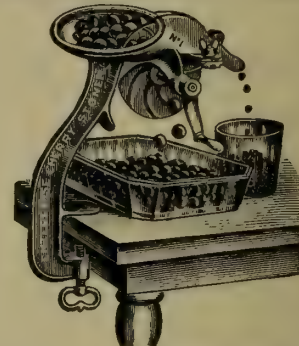
45 Sizes and Styles for Hand, Steam and Electric Power.



No. 2, - \$3.75

CHERRY STONERS

5 Sizes and Styles, Tinned or Japanned



No. 1, - \$7.50 per Doz.

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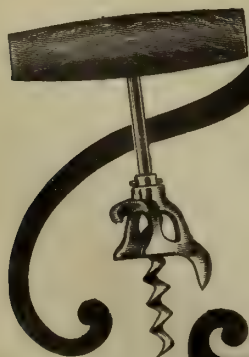
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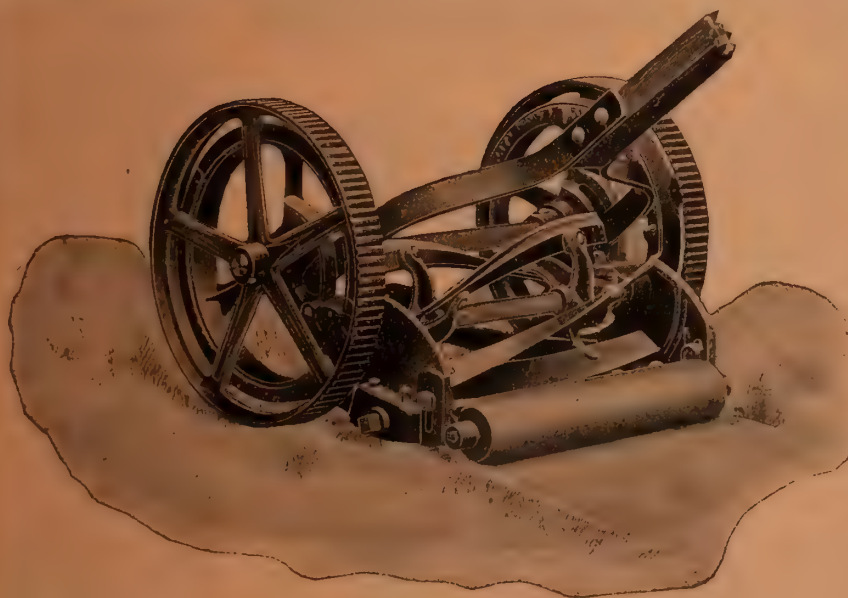
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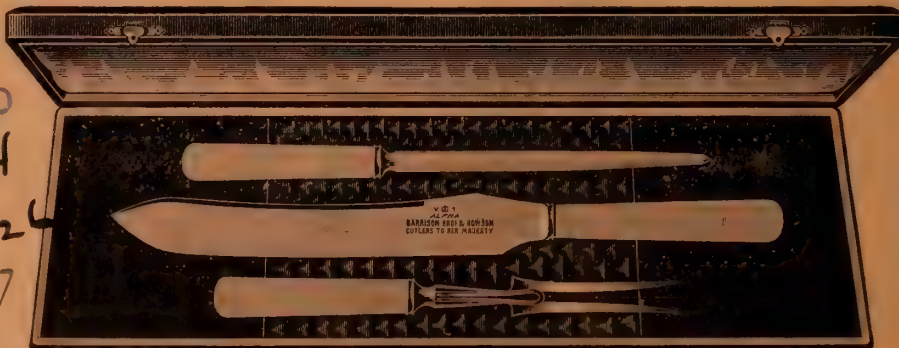
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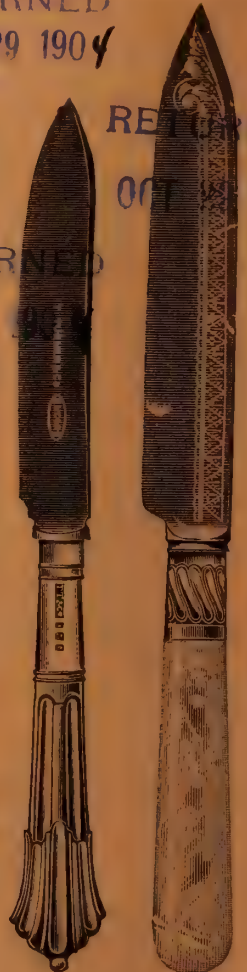
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3-piece set of Carvers, Stag Handles, in Case.



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Sterling
Handle
Fruit
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Pearl
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Knife, in
1/2 doz. and
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Consider the amount you allow in claims during the year for goods being lost or stolen in transit.

Do away with this annoyance; my booklet tells you how to do it.

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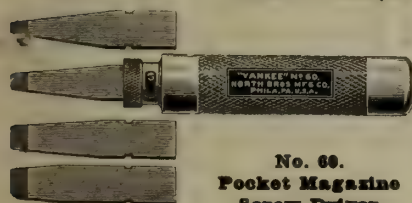
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Two



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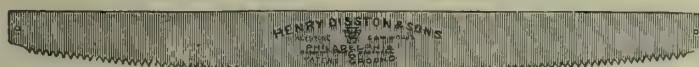
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DISSTON'S No. 4—Mitre-Box Saw, 18, 20 and 22 inches, 4 inches wide, highest quality steel blade, apple handle.

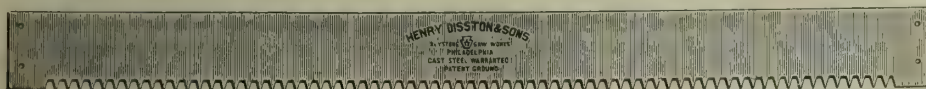
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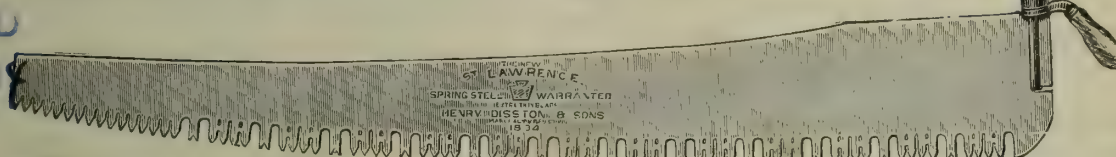
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Remember--that the re-collection of quality will remain long after the price has been forgotten.

Therefore sell the best quality of Horse Nails: and the "C" brand should receive your preference.

They are made from the best material known or used for the manufacture of horse nails in the world. It is a special mild tough Swedish charcoal steel, made expressly for our requirements.

Every box of "C" brand horse nails carries with it the absolute guarantee that every nail shall be found perfect and ready for immediate use.

Judge our nails by their quality—they will stand every reasonable test that the most exacting use demands.

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We want some of that Canadian trade in Cap and Set Screws, Nuts and Milled Pieces from the bar, that is going to the States. Our prices are better, and so we think are the goods, and if you will let us know your wants we will give you good satisfaction on deliveries. Interesting catalogue for the asking.

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43 and 44 Percival Street, London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

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Ahead of all others in quality and workmanship. If sparks of fine quality, set by experts, are what you require, buy Diamonds of A. Shaw & Son's make.

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FULL NICKEL PLATE FINISH.

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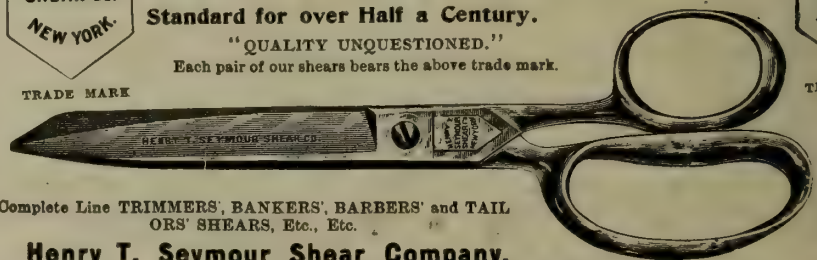
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Each pair of our shears bears the above trade mark.

Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

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WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.



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Oneida Community Cow Ties can be had of all
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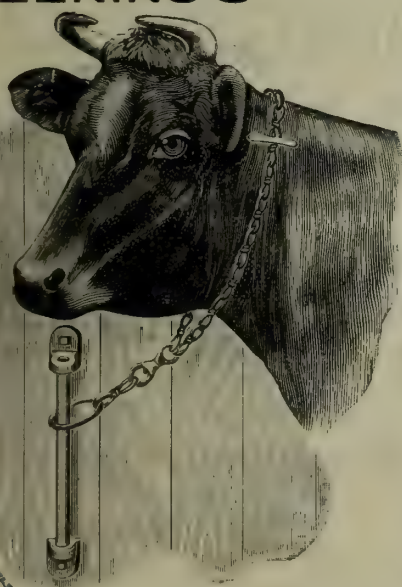
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PATENT COW TIES.

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Undoubtedly the
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A complete line of all sizes ready for shipment.

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Hay, Straw, Pulp, Paper,
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Steel Wire Hoops

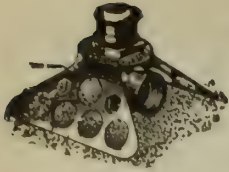
For all Kinds of Barrels.

They are stronger, and when properly placed
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Manufacturers of **FLATWARE, CUTLERY and
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Strong, Quick, Reliable, Effective.

Will close a door against any pressure of wind.
Far ahead of ordinary door springs, pneumatic or
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In all parts of Canada are our
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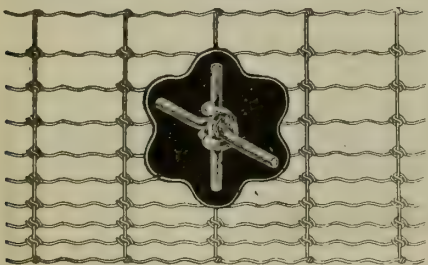
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May we not hope to add you?

Send for price.

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Galvanized Wire is used throughout. SEE OUR EXHIBIT
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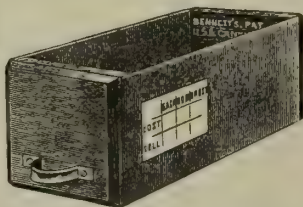
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We make a specialty of heavy stock and can fill orders
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If you are in need of anything in our line we will be pleased
to hear from you and we will give it our prompt attention.

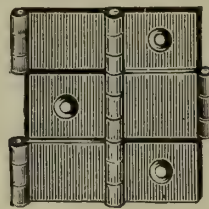
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A perfect working model wrench, exact size of cut.
Accurately proportioned and made exactly to scale.
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Cabinet Hinges

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ware of all descrip-
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Why handle Barb and Coiled Wire at no profit when
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When ordering

**BEST MANILA
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be sure and insist upon the dealer supplying
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**Consumers Cordage
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Then you will receive a satisfactory
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 IS THE TIME TO PLACE YOUR SORTING UP ORDERS
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BEST GOODS

QUALITY GUARANTEED

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PRICE is a good thing,—but,
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Wilcox Door Hangers Combine Both.

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STEEL SNOW SHOVELS

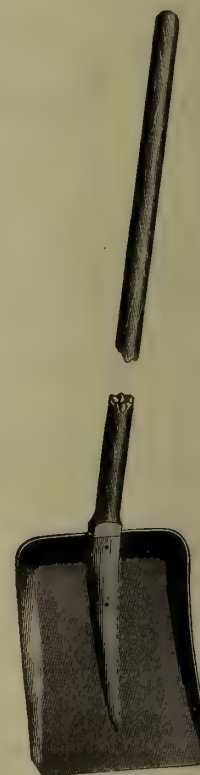
**Strong and
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YET LOW IN PRICE

Your stock will lack one of the best selling Shovels if
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Finished in Japanned

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KEMP MANUFACTURING CO., TORONTO, Canada

TO THE MASTER PLUMBERS OF CANADA

A Personal
Talk by
The Editor

WE desire to have a heart to heart talk with the master plumbers of Canada.

Our proposition should interest every member of the craft from the Atlantic to the Pacific.

We are, therefore, sending this issue of Hardware and Metal to every Canadian plumber and steamfitter.

In return we ask a fair hearing of our proposition.

Canada is becoming more and more an integral nation; in fact national sentiment has within recent years become so strong that no Canadian profession will be satisfied with a trade organ published outside of the Dominion. Trade publications of real merit in foreign countries will always have an honored place here, but a Canadian publication is now an essential factor in every field of activity, social or industrial.

Hardware and Metal is the only paper in Canada devoted to plumbing interests, the only one having endorsement of members of the National Master Plumbers Association.

This situation makes opportunities and imposes responsibilities upon Hardware and Metal. We have recognized this fact and have devoted much thought and attention to the matter, the result being the proposition we have to make to the plumbers of Canada.

Let us speak frankly and unreservedly. The suggestion was made that we should issue a separate plumbing paper, but the recent experience of a Chicago exchange and careful canvass of the situation convinces us that, for the present at least, such a step is impracticable; would, in fact, be futile. Instead we decided to, as soon as possible, make Hardware and Metal worthy of the enthusiastic support of every plumber in the country.

What must be done? To argue backwards, we must recognize as our end in view the acceptance of Hardware and Metal as the general means of communication among master plumbers and between the supply men and the master plumbers.

To do this we must have practically every master plumber in Canada on our subscription list.

How are we to make every plumber a

subscriber? By making the paper of unquestionable value to them and by convincing them of its value. Already the most progressive plumbers are subscribers of the paper. These readers have expressed such satisfaction with the market reports, the associational and other trade news, that we will continue these features and will in every way endeavor to improve them. And we must add some features which will make the paper of more value.

What should be added? We would appreciate sincerely any suggestions or criticisms along this line from readers of this issue. We propose as permanent features of our plumbing section:

1. **Market reports**—Weekly reports and reviews on all plumbing goods.

2. **News of the trade**—Items of interest about supply houses or master plumbers, about contracts, building operations, etc.

3. **Associational News**—All information that can be secured about the National, Ontario or local associations. We are willing to publish any notices or reports from any local secretary. All conventions, banquets, social meetings, etc., will be reported as fully as possible.

4. **Technical Articles**—Our columns are open for technical articles of interest to plumbers.

Have you done a good heating job this season? Send us a copy of your blue prints showing detail of installation, also the necessary information as to how the work was done. We will have cuts made from the prints, will publish the same with the description given and will give the correspondent full credit for the article so provided.

Have you an opinion on any plumbing topic that you would like to express? Have you a question you would like to ask? Send these to Hardware and Metal and we will give the matter thorough attention.

Have you a show room of which you are proud? Send us a photograph of it, giving description of its arrangement, and we will publish the view, together with any comments suggested.

Have you completed a handsome plumbing job? Send us a photograph of it, together with a description of the method of installing. We will pay charges for the photograph, get a "cut" made and publish the same in the paper.

These features will be for the general good of the profession, and we trust that the plumbers of Canada will recognize the advantage of complying with these suggestions by their practical endorsement.

Such are our proposals. In some degree the full fruition of our plans depends on the support given by the Canadian plumbers themselves. Yet we are determined to reach the end desired sooner or later. We have the assurance of support by some of the leading supply houses and we are confident, from the promises of help given by some of the most capable plumbers, that before the end of the year we will have for publication a series of technical articles that will prove of unquestioned value to the craft.

Now, what do YOU think of our proposition? We ask your support in building up in Canada a paper which will demonstrate that plumbing has reached in this country a point of development which compares favorably with the progress in any country in the world. We need your subscription but we want more: we desire your active co-operation.

Send in your subscription now and follow it up by sending us such news about your business as you would like to have published, and which would be of general interest to other plumbers.

Also, if you think our proposals could be improved on do not hesitate to criticize or make suggestions. We want your advice as much as your news or your subscription.

In another matter we have endeavored to be of service to the plumbers and steamfitters of Canada. Recognizing the lack of technical books relating to heating and plumbing in this country, Hardware and Metal secured the Canadian agency for some of the standard technical works on these subjects. Already the wisdom of this step has been amply demonstrated. Our readers have generously taken advantage of our offer to supply these works.

Reference will be made in another part of the paper to some of the best books of interest to readers of this page. Any of the books mentioned can be had on inquiry.

D. O. M.

DOMINION IRON AND STEEL COMPANY REPORT.

THE annual report of the Dominion Iron and Steel Co., at the meeting in Montreal last week has done much to establish confidence in the future of that concern. The report included the following references to the work of the company:

Coal—The coal received from the Dominion Coal Company requires to be washed in order to reduce the sulphur and improve the structure of the coke so that it will work economically in the blast furnaces. Our coal requirements, with two blast furnaces running, are about 45,000 tons per month.

Coke ovens—It has been found from experience that retort ovens, such as the company has installed, require forty to forty-eight hours to make coke suitable for blast furnace purposes from the Cape Breton coals, which are high in volatile matter. The present 450 ovens will, therefore, not make as much coke as is required to run three blast furnaces, but I think it would be better not to build additional ovens until the effect of the washing plant is better known, when we can tell more definitely the number of ovens required.

Furnaces—The company's four blast furnaces are well equipped with modern machinery. Five of the ten furnaces of the open hearth plant are in operation and doing fairly good work.

Blooming mills—The continuous billet mill, which was completed in April, will roll blooms into small billets without reheating faster than the blooming mill can deliver them. The billet mill supplies billets to the wire rod mill, also 1 1/2 to 3-inch billets for the market. The rod mill, which was also completed in April last, was designed to roll 200 tons per day, but has proved itself capable of turning out 250 tons. This mill has proved highly successful, and is making wire rods of very satisfactory quality. The rail mill now being installed will have a capacity of 500 tons a shift. We expect to be ready to roll for next season's demands.

Products—The company's products now cover the following range:

1. Basic pig iron made from Wabana ore without admixture. This is the only pig iron used by us for the manufacture of steel.

2. Foundry pig iron, made from Wabana ore alone, which produces cheaply

an iron of better quality than Middlesborough, England.

3. Foundry pig iron of better quality, similar to Scotch foundry iron, made from Wabana ore with a percentage of low phosphorus ore mixed. The ore used for mixing has usually been brought from Spain; this year we bought 20,000 tons on Lake Superior at a satisfactory price.

4. Steel ingots, in manufacturing which pig iron made from Wabana ore alone is used.

5. Blooms, billets and slabs for sale, and billets for use in rod mill.

6. Wire rods up to 3-8 inch diameter. In addition sulphuric acid and the by-products of the coke ovens, tar, sulphate of ammonia, etc., are sold and before long we shall add steel rails to the above list.

Now that we can supply two blast furnaces with coke made from washed coal we look for an improvement in practice and cost. The results of operations in September indicate that the new coke will enable us to increase our output of pig iron and decrease our consumption of limestone, both potent factors in the matter of cost.

Steel made from Wabana ore alone has proved to be of good quality; a large tonnage has been manufactured into boiler tubes, boiler plates and car axle, angle plates, wire rods, and all other products for which open hearth steel is used. Before starting to build the rail mill, 115 tons of steel blooms were sent to England and made into standard 80-pound rails. The rails were rolled and tested under the supervision of Mr. C. P. Sandberg, who represents in such matters the Governments of Canada, Sweden, etc., and many other important bodies. He reports most favorably of their quality.

Markets—Canada consumes annually over 1,000,000 tons of pig iron and steel, and should undoubtedly be our best market. The output of the plant should therefore be manufactured into such products as the Canadian market calls for, keeping to the fewest lines which will keep the works running fully. Our whole tonnage could undoubtedly be sold in Canada in the shape of rails, billets and wire rods, but it may be found later on advantageous to install the plate mill and 22-inch merchant

mill, which the company has already purchased.

President J. H. Plummer, in his address moving the report, stated that the rod mill at Sydney had been pronounced by experts to be the best yet built anywhere in the world and was already turning out rods of superior quality, which was giving satisfaction to wire and nail manufacturers. He believed there was no market for any commodity more promising than that for the products of the mill which was capable of producing all of this material now used in Canada. Another interesting fact was it had been found that the Lake Superior ore could be laid down at Sydney at very little greater cost than at Pittsburg. In fact iron ore is to-day costing less per ton, delivered at the works at Sydney, than was first estimated. The ore is of an excellent quality, and it was only necessary to bring in 6 per cent. of foreign ore, this being done in order to produce special foundry pig. European ore could be brought in as cheap as to England. Then there was going to be a much better market for iron and steel products. On question of quality the company could appeal confidently to the market.

Vice-President Frederick Nicholls, in seconding the adoption of the report, stated that when he went into the company eighteen months ago, everything looked about as badly as it possibly could. New capital was then needed to complete the work, but the company was discredited, and the only feasible plan was that of the directors coming forward; and they had done so to the extent of one and one-half millions, taking as security second mortgage bonds. The result of this had been that they were able to complete the plant, and he now considered that it was fairly upon its feet. He stated that for the last year the company had held its own. They were in his opinion most fortunate in obtaining Mr. Graham Fraser, and he also spoke in the highest terms of the manner in which Mr. Plummer had put his shoulder to the wheel at the time when everything looked its worst.

Mr. Graham Fraser, general manager, after giving an account of the different plants, made a statement regarding the market in Canada. The whole tonnage of the company could undoubtedly be sold in Canada in rail, billets and wire rods, and it might be found advantageous later on to install a plate mill and a twenty-two inch mill.

Technical Book Reviews

Readers of **HARDWARE AND METAL** can secure any of the books referred to below at publishers' prices by writing to Book Department, **HARDWARE AND METAL**, Toronto.

The Trust Company Idea and its Development. By Ernest Heaton, Barrister-at-Law, Osgoode Hall, Toronto. Price \$1.00.

In this little handbook of 45 pages, a short account is given of the American, Canadian, New Zealand and Australian trust companies, and of the trust company idea in England: In the latter country the least progress has been made. According to our conception, a trust company exists principally or solely to discharge the functions and perform the duties of a trustee, an executor or administrator of an estate. Such is its legitimate and sole function and as such its duties are performed with much advantage to those requiring its assistance. In the United States, trust companies have proceeded far beyond this conception. Some of them have become in finance a departmental store, in addition to the duties just mentioned they reorganize and promote corporations and underwrite their stock or act as a bank and particularly in the savings branch.

In 11 years from 1893 to 1903, 41 failures of trust companies are reported in the United States. This we are told compares very favorably with the records of national and state banks during the same period. To us this appears a shocking record. Mr. Heaton might with advantage emphasize more strongly the contrast between a properly managed trust company on the Canadian or English plan and the American departmental store.

We note the legislative provision in Ontario against excessive competition and the excellent record of trust companies in Ontario and notably of the

FLOOR FINISHES

A Square Proposition

The *Sherwin-Williams* floor finish proposition is *square*—square for S. W. P. agents and for their customers.

It is square for S. W. P. agents because when they make a small investment in *Sherwin-Williams Modern Method Floor Finishes*, we provide a successful advertising plan of bringing in floor finish customers. A stock of Modern Method Floor Finishes means *new* business, a new source of profit for the agent.

The proposition is square for the user, because Modern Method Floor Finishes are just as represented—they include the best finish for *any floor—any style*. They give satisfaction.

Let us tell you about our plan.



THE SHERWIN-WILLIAMS CO.

PAINT AND VARNISH MAKERS.

Canadian Headquarters and Plant: 639 Centre St., Montreal,
Warehouses: 86 York St., Toronto; 147 Bannatyne St., East,
Winnipeg, Man.



WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO
Limited
HAMILTON, ONT.

pioneer, the Toronto General Trusts Corporation whose careful and conservative management has been the means of averting much loss to its clients and patrons. We hope the author will issue a further edition with more extended information on this important subject.

A.M.

* * *

The Up-to-date Hardwood Finisher. By F. T. Hodgson, architect; illustrated; published by Frederick J. Drake & Co., Chicago, in 1904.

This volume is divided into two parts. The first part gives rules and methods for working hardwoods, with descriptions of tools required, the methods of using, and methods of sharpening and caring for them. These tools include saws, planes, files, scrapers, chisels, gouges and other woodworking tools. Information is also given as to how to choose hardwoods for various purposes,

and how to work and properly manage veneers. The proper use of glue is demonstrated, and directions are given for preparing glue, blind or secret nailing, etc. The second part treats on the filing, steaming, varnishing, polishing, gilding, enameling and finishing all kinds of woodwork. It also treats on the renovating of old work, repolishing, re-varnishing and wood finishing generally. There is a short treatise on dyeing woods in various colors for inlaying and marquetry work, with rules for making staining, dyes, fillers and polishes of various kinds.

It must be said that this volume deals with the preparation and finishing of different woods in a thorough and comprehensive manner. Information is gained from various sources including technical journals and practical men, and for that reason the book cannot fail

to be of interest and value to those interested in this subject.

Change Gear Devices. A book showing the development of the screw cutting lathe and the methods of obtaining various pitches of threads; by Oscar E. Perrigo; published by the Locomotive Publishing Co., Limited, London.

The question of change gears for lathes has become during the last few years of great interest to the mechanical world, and an immense amount of time has been spent on the development of change gear devices for the screw-cutting lathes. This is the reason the author has for the production of this work. Without doubt the development as described in this little work would be of great interest to all having anything to do with the screw-cutting lathe, besides being of considerable value. In the book there are twenty-nine patents described and illustrated, out of one hundred and sixty-four considered, but the author claims that these twenty-nine patents include all the subject matter from the earliest and latest patent.

A review of the contents of the book will give an idea of what ground the book covers. The first chapter goes a little into the history of the lathe in which are illustrated and described some of the earliest forms of the lathe. The second chapter deals with the change gear patents covering all dissimilar devices from that of Bancroft and Sellers patented in 1854 to that of Newton, patented in 1903.

Machine Shop Arithmetic. A pocket book containing some of the problems of everyday shop happenings, and affording their quick and accurate solution by easy methods; by F. H. Colvin and W. L. Cheney.

This should prove a handy reference book for practical men. A review of the contents is as follows: Decimals, being a short review of this system of numeration for practical work; conventional rules for square and cubic root; formulas of practical value; mensuration of surfaces, areas and volumes of bodies; rules for selecting change gears for screw-cutting; bolts and nuts; speed of pulleys and gears; calculating the speed of milling cutters, drills, etc.; speeds of grindstones and emery wheels; principles of square and cube root; principles of screw-cutting; and handy ways for calculating.

Hammer the Hammer



A Life Saver.

Any revolver that can be handled in this manner is safe under any and all conditions. Safe to use, safe to carry, safe to stock your warehouse with. Just as safe to sell as it is to own. Dead stock is not any part of the **IVER JOHNSON** policy. They manufacture the article and then create the demand for it by making the best and advertising it extensively. A sane business man cannot afford to sell any other. What his customers require he should sell. Revolver buyers are now demanding the

IVER JOHNSON.

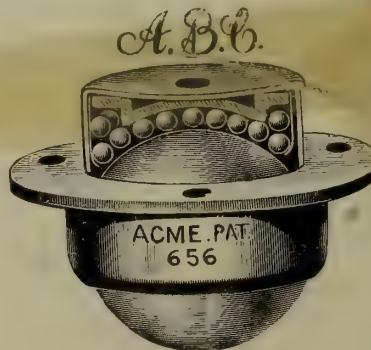
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New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

ACME BALL CASTER.

THE Smith & Hemenway Co., 296 Broadway, New York, are now manufacturing Acme ball casters, as illustrated in the accompanying cut. It will be noted that these now have a steel bearing for the small balls to run on. This cone is very similar to that of a bicycle or automobile. The top of the caster containing a quantity of small



balls, they are always in constant contact with the top of the large ball, because of the groove, as shown in the top of the caster, being in disform. When the caster is rolled, the balls go from right to left (according to the

movement of the caster) roll off into the groove and return to enter again the bearing from the back side. It is absolutely impossible to break down this construction of the caster.

Another improvement is shown in the solid rim instead of fingers or claws, which formerly held the balls in the shell. The solid rim is slightly over the centre of the ball, and is beveled so as to hold the ball in the shell. This obviates any possible chance of the ball ever dropping from its original position. Smith & Hemenway intend to make all their casters this way in future, but up to the present time this is the first caster that has been made on the improved plan. Their business has improved so rapidly that they have had to increase their facilities very materially in order to keep up with their deliveries. From January up till August of this year they were thirty to thirty-five days behind in making deliveries on these goods, but with their improved facilities they can now ship promptly. When shod with these casters, heavy furniture, pianos, refrigerators, shoe rack tables, divans, as well as light furniture, can be moved with great ease.

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wholesale

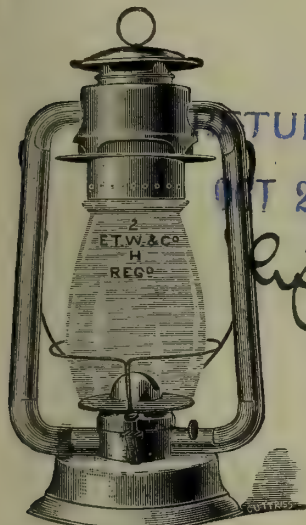
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Telephone:—Office, Park 1584

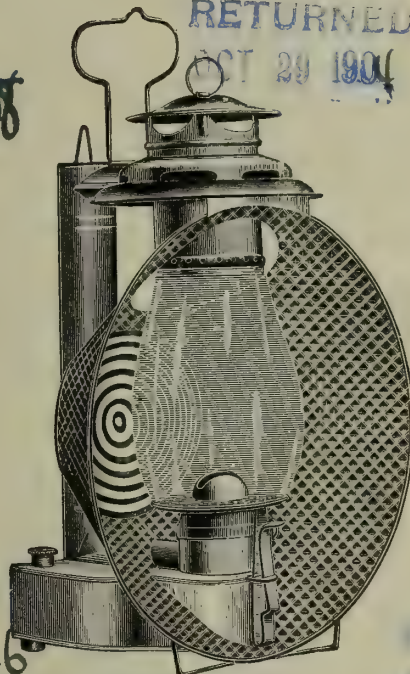
(Where orders may be left if not convenient to visit our Warehouse at Parkdale.)

Telephone:—Warehouse, Park 1585

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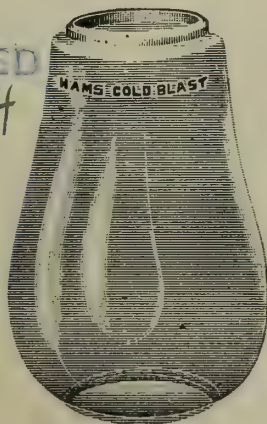
No. 20. Search Light, Japanned.



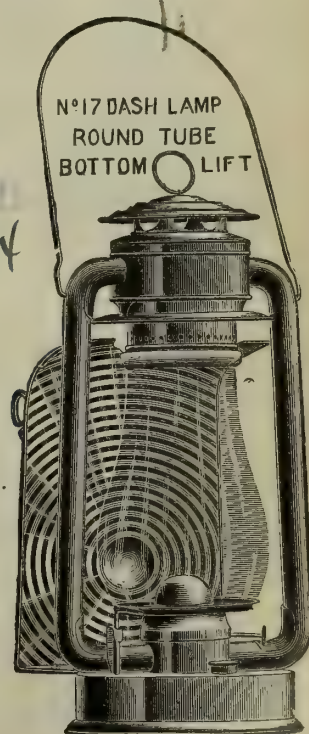
"Banner" Cold Blast.



"Defiance" Cold Blast.



Cold Blast Lantern Globe



Dash Board.
"Banner" Cold Blast.

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We Ship Promptly.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

HEART TO HEART TALKS

are sometimes good things and we are going to indulge in a short one with you about valves. We are not going to tell you our troubles, because we really have none now in the valve line. A good many years ago when we first started manufacturing valves we might have had a few, but these have all been overcome long ago. By the way are you having any trouble with valves? If so, it's dollars to doughnuts the most trouble is with the disc? We believe that the disc is the most important part of the valve. That's why we are constantly advertising the superior qualities of our disc construction. The trouble with most discs is that they will flake or break off under steam pressure. Such an occurrence is an impossibility with a Fairbanks Vulcanized Asbestos Disc. Because the disc is composed of the fibre of asbestos to which is added waterproof vulcanized material, making a durable packing which will not crack or flake off.

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These four illustrations will give you a good idea of

FAIRBANKS RENEWABLE ASBESTOS DISC VALVES.

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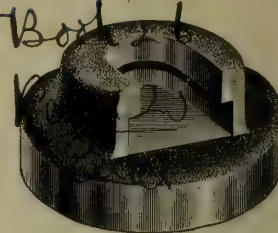
This is the valve itself.



This shows the interior construction.



This shows how easily a Fairbanks Disc is changed without tools.



This is the Disc itself.

YOU'RE CHEATING YOURSELF if you are a valve user and are not using Fairbanks Valves.

THIS IS "WHY" and "BECAUSE" Fairbanks Valves are built on honor. There is nothing cheap or skimpy about them. The continued use of them by most of the largest steam plants throughout Canada is sufficient evidence of the satisfaction they are giving. The construction of the Disc and the Renewable Disc feature are superior to those of any other valve manufacturer. To change the disc you have simply to remove the bonnet, slip the old disc from end of spindle, substitute a new disc and replace bonnet. No tools nor loss of time. Think it over. It's to your interest.

FAIRBANKS VALVES — **LONGEST WEARING MOST ECONOMICAL.**

SEND FOR VALVE CATALOGUE.

THE FAIRBANKS COMPANY

MONTREAL.

TORONTO.

VANCOUVER.

WINNIPEG.

MACHINERY

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Oct. 27, 1904.

ALL manufacturers and dealers of machinery report a fairly good business within the past week. Shipments are somewhat less numerous than a year ago, but a fair volume of business is passing, with nothing unusual to report. There is less demand for wood-working machinery on account of the fact that many of the smaller sawmills are shut down at present, as in the majority of cases the owners personally superintend the cutting of logs for their mills, many of them going to the camp with the men. More orders for iron-working machinery have been received this week than last and machine shop supplies such as pulleys, belting, tools, etc. are moving well. Electrical machinery continues active, but hardly as much so as earlier in the Fall.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East.
Toronto, Oct. 28, 1904.

THE conditions on this market continue to be encouraging. There is a considerable volume of business being done in most lines, consisting for the most part of small and ordinary orders. Inquiries also continue to come in briskly, and the outlook is a good one.

Woodworking machinery and engines and boilers still maintain their position on the market. There has been a considerable demand for gas and gasoline engines during the past couple of weeks for power purposes.

There has also been a good demand for machine boats during the last two weeks, and more orders have been placed in this line than for some time.

Machinery and Electrical Notes.

Among the orders placed with H. W. Petrie, Toronto, recently, are complete tinsmith outfit for G. A. Elliott, Jr., Brantford; Cincinnati milling machine, a Lodge & Shipley lathe and a Cincinnati drill for G. C. Brooks, Falls View, Ont.; large independent condenser for

the Toronto Electric Light Co., Toronto; Cincinnati shaper and band sawing machine for W. Kelehon, Hensel, Ont.; planer and gas engine for A. Bell, Dunnville, Ont.; gasoline engine and dough mixer for E. Trought, Inglewood, Ont., and gasoline engine for B. J. Johnston, Caledon.

McGouldrick & Lammers are considering the proposition of erecting a large saw mill in the vicinity of Nelson, B.C.

Cowan & Co., Limited, of Galt, Ont., have closed a contract with the Rat Portage Lumber Co. for an outfit of woodworking machinery.

The Corbet Foundry and Machine Co., Owen Sound, Ont., have secured the contract for the manufacture of 1,000 pairs of steel truss whiffletrees for the patentees, a firm in Hamilton.

The American Horseshoe Co. have secured a site in Hamilton and it is understood that tenders have been let for the erection of a factory.

The Norton Mfg. Co., Hamilton, are asking for tenders for a three-storey 60x100 feet mill.

The Carney Lumber Co., Owen Sound, Ont., have closed a deal by which they agree to build a saw mill to employ 200 men on consideration of exemption from taxation for ten years.

The Southwestern Traction Co.'s power house, London, Ont., intend spending \$200,000 on a new power house and the incidental machinery.

The Kingston Locomotive Works have, according to a Kingston despatch, received an order for twenty-five locomotives from the Grand Trunk Co. The engines are to be built within eighteen months.

A 30-horse-power Westinghouse electric motor, moulding machines, stickers, etc., have been installed by the Scott & Hudson Building Co., Rat Portage, Ont.

D. Moore, Qu'Appelle, N.W.T., has put an electric light plant in his mill.

Boissevain, Man., electric plant is about completed.

The additions to the Vulean Iron Works, Winnipeg, are about completed.

Deloraine, Man., will spend \$6,000 on new fire apparatus.

D. V. and A. J. Mott have been granted a franchise to install a telephone system in Fernie, B.C.

The Ogilvie Milling Co. have plans prepared for their new mill at Fort William, Ont.

H. W. Warrington and party are laying out a proposed extension of 300 miles of railway.

Indian Head, N.W.T., is considering putting in a waterworks system.

Machine Shop Economics.

A MANUFACTURING firm, in its catalogue, gives some good advice to machine shop operators, among which are a number of paragraphs worthy of a passing thought.

The implements in the hands of the workmen determine the amount of output per dollar paid.

No prosperity will come to the proprietor or workmen in a shop using obsolete machines.

Many managers have been unsuccessful because they have had both eyes fixed on the payroll, overlooking the inefficient methods existing in the works.

Workmen have gone out from such shops to find employment elsewhere, only to learn that they have become back numbers; that they are not familiar with the kind of machines used in successful works.

The reputation of the manager and superintendent, and the prosperity of the plant and of each individual depends on the implements placed in the hands of the workers.

The cost of installing up-to-date machines does not usually exceed the extra cost per year of running the old machines. That is, the saving effected in the first year and each year thereafter is generally greater than the first cost of these machines. It is not a difficult fact to have this fact demonstrated.

A machine shop properly equipped should have a universal and adaptable equipment for all work within its range. Such a plant is worth every dollar of its honest inventory, and will survive with the fittest.

A very important saving is effected by accurate uniformity of work. Every

machine shop manager knows the endless time spent in the "setting up" or assembling room by trying to make parts fit together than have been poorly made. Accurate duplication cuts down the total cost of the finished product of a plant.

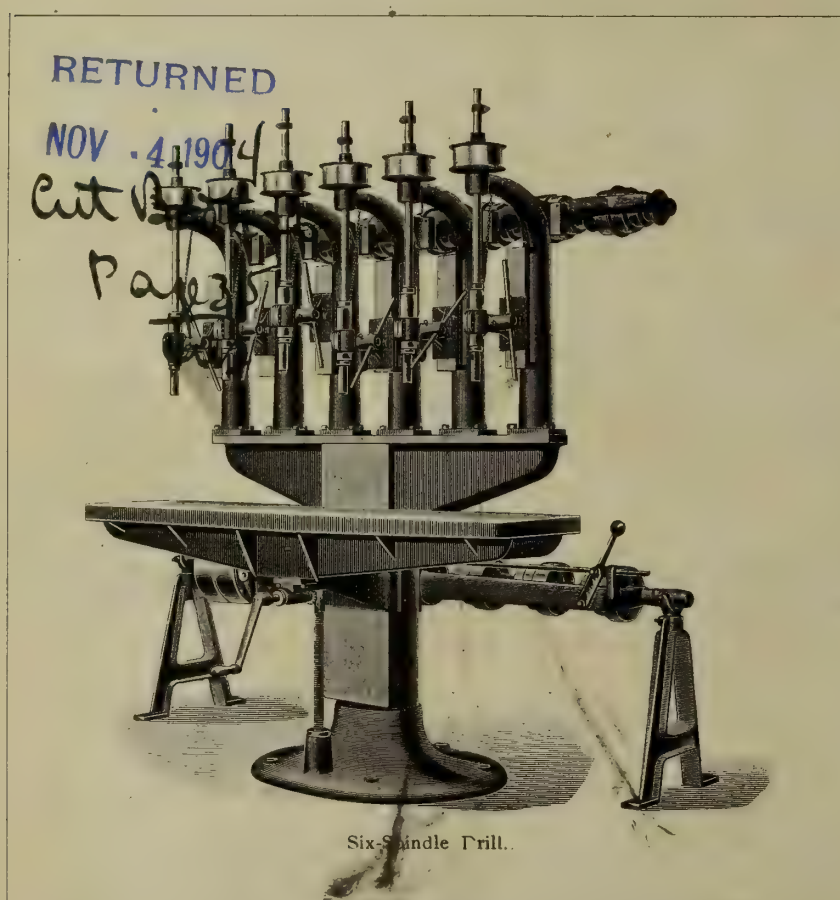
Six-Spindle Drill.

THIS illustration shows one of the drilling machines built by H. G. Barr, Worcester, Mass., U. S. A. The subject of the illustration is a 6-spindle 14 in. to 16 in. swing, with lever feed, 5 in. pulleys, No. 1 Morse taper. These machines are built in five styles of single spindle, all having lever feed and 5 in. pulleys on spindles. There are 2, 3, 4, 5, 6, 7-spindle machines

There is also a line of 2, 3, 4, 5, 6-spindle machines with geared spindles having 7 in. pulleys, which give great power for so light a machine. All of the smaller machines have a spindle travel of $3\frac{1}{2}$ in., all the larger ones have a travel of 5 in., all have adjustable heads and adjustable tables. All tables on multiple drills are raised with a crank through bevel gears and screw running in a brass nut in the table.

The columns are heavily braced inside and are very rigid. The tables are very large and heavy, the lighter machines having oil groove around tables while the larger ones have plain tables 16 in. wide. Special tables are made to order when wanted.

Recent additions and improvements



Six-Spindle Drill.

having 14 in. to 16 in. swing lever feed, and 18 in. to 20 in. swing having the same pulleys. All the above have No. 1 Morse taper in the spindles. Power feed driven and used independent to each spindle can be furnished if desired on all multiple spindle drilling machines.

There is a line of drills from 2 to 6-spindles having 7 in. pulleys on the spindles with No. 2 Morse taper in the spindles. These are provided with power feed, automatic stop, quick return, swing 18 in. to 20 in., and can be furnished without the power feed and used as a lever feed drill if desired.

make this easily the most complete line of sensitive drilling machines in the world, and the reputation of this firm for reliable machinery is beyond question.

There are several of these machines in the vicinity of Montreal and Toronto, ranging from one to six-spindles to a machine, but as yet none with power feed, or of the heavier type.

There are agents established in both Montreal and Toronto representing these tools, and it will pay to look into their merits before placing orders.

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
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50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

MACHINERY WANTED.

Items under this heading inserted free for readers of **HARDWARE AND METAL**

ELECTRIC LIGHT MOTOR WANTED—Incandescent; about 50 lights. Address E. Smith Basket and Veneer Co., Leamington, Ont.

SMOKESTACK WANTED—40 or 50 feet of 24 inch stack; new or second-hand; in first-class condition; also small lath machine. Box 80, Providence Bay, Ont.

TRIPLE EXPANSION ENGINE—Having high pressure; about 4 x 6; state full particulars. H. C. Minett, Minett P.O.

WANTED—Second-hand Gasoline Engine. 15 h.p., with $3\frac{1}{2}$ in. pulley. Must be in good repair and cheap. James Leach, Eden, Ont.

WANTED—Second-hand 25 h.p. firebox boiler; must be first-class. Address Box 308, Petrollea, Ont.

WANTED—10 h.p. Motor of 110 volts. State how long in use and lowest price. Address P.O. Box 378, Winnipeg.

WANTED—To purchase at once for cash, small second-hand Gasoline Engine, 4 h.p., full outfit. Apply R. Gillespie, Norwood, Ont.

WANTED—Good second hand pair tinnern's squaring shears, either 24 or 30 in. cut, state make, how long used, condition and price. Bennett & Son, Gananoque.

WANTED—Second-hand Plate Chopper. Pulleys and Shafting to connect. Lock Box 22, Burford.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, **HARDWARE AND METAL**, Montreal.

ENGINE FOR SALE—20 h.p.; stationary, side crank. Price \$80. Address Box 41, **HARDWARE AND METAL**, Montreal.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.

IT WILL PAY YOU



to stock the best globe valves "made in Canada."

KERR'S are made of the best steam metal, accurately fitted and perfectly tight.

CATALOGUE FOR THE ASKING.

THE KERR ENGINE CO.,
WALKERVILLE, ONT. Limited



Our New . .

. Oil Pump.



Write for . .

Particulars.

Mention Hardware and Metal

Penberthy Injector Co., Limited, Windsor, Ont.

"MAPLE LEAF"

Stitched Cotton Duck Belting

MADE IN CANADA



MADE IN CANADA

"Maple Leaf" is made of the best cotton duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.

"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying

Main Drive Belts a specialty.

Ask for "Maple Leaf" and take no other.

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DOMINION BELTING COMPANY

HAMILTON, ONTARIO. Limited

Use our "MAPLE LEAF" Belt Dressing.



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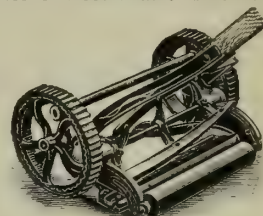
Improved Steel Stand, Roller Bearings, and Foot and Hand Lever Drive, and Detachable Driving Link. Improved for season of 1904. Steel or Wood Frame as desired.

Lawn Mowers.

High and Low Wheels, from 12 in. to 20 in. widths. Cold Rolled Steel Shafting, Crucible Steel Knives and Cutting Plate.

If your Wholesale House does not offer you these articles

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MAXWELL MOWER

8-in. Low Wheel.

Wheelbarrows.

In Four Different Sizes.

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge. Steel and Twist Barrels. Superior in Design, Workmanship and Finish, and the most popular Gun on the Market.

Simplest "Take Down" Gun Made



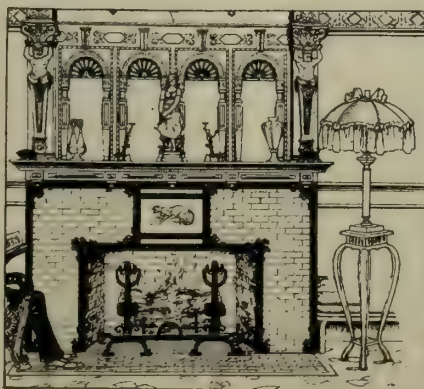
HARRINGTON & RICHARDSON ARMS CO.
Also makers of H. & R. Revolvers.
Catalog on request. Worcester, Mass., U.S.A.

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SPECIAL
HERCULES
METALLIC
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THE **CANADA METAL CO.**
QUALITY & PRICE TO SUIT
ALL GRADES OF WORK.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



**FIRE DOGS
SMOKE GUARDS
FENDERS, SCREENS
CARRIED IN STOCK**

Send for Bulletin No. 20.

CANADA FOUNDRY CO., Limited

HEAD OFFICE, TORONTO.

DISTRICT OFFICES,
MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
CALGARY, VANCOUVER, ROSSLAND,

The Fairbanks Wood Split Pulley.

FAIRBANKS' WOOD SPLIT PULLEY now being manufactured in Montreal and sold by the Fairbanks Co. in their Montreal, Toronto, Winnipeg and Vancouver houses, is shown in the accompanying cut.

This pulley has been manufactured for some time in the United States, and was selected by the Fairbanks Co. as the best wood split pulley made.

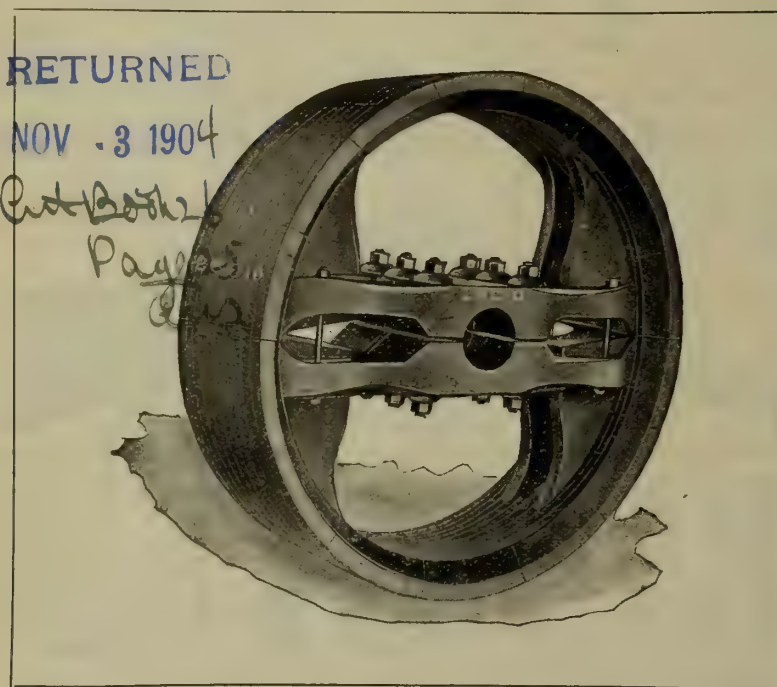
The following is a description of same: The arms of the Fairbanks wood pulley are made of hard maple, well seasoned and thoroughly kiln-dried; they are clamped together and bored, thereby making a perfect round hole so as to fit the shaft. The hub is then cut so as to allow compression to be obtained, and the friction surface on the shaft is nearly equal in length to the width of the face of the pulley. The outer face

which not only strengthens the entire pulley but makes it impossible for the rim to work loose at the arm. The pulley is inspected in the course of its construction as to material and workmanship.

This pulley is particularly adapted for saw and planing mill work. Any further information will be gladly furnished by the Fairbanks Co. Several agencies have been established throughout Canada for these wood split pulleys.

Which is Engine of Future?

CONSIDERABLE interest has been aroused by the above question asked a few weeks ago by a subscriber of Hardware and Metal. F. W. Derrick, superintendent of the Montreal rolling mills, said that his experience with steam turbines was limited to



of the arms are so cut as to add to the appearance of the pulley. The outer ends of these arms are provided with recesses to receive the webs. These webs are thoroughly glued and nailed to the arm and are built in with the rim, thereby making a strong connection between the arms and the rim.

The rim of the pulley is made of soft wood, thoroughly seasoned and kiln-dried. The segments are built up on a true inside circle and thoroughly glued and nailed. The entire pulley, so to speak, is built up at the same time, which according to our judgment is an advantage over pulleys where the rims and arms are built up separately and afterwards assembled.

This pulley with its web construction is an advantage over other pulleys, owing to the support given to the rim,

what he had read in magazines and newspapers, so that he was thus not in a position to give a definite opinion regarding them. Their practical application so far had been limited mainly to marine work where they seemed to be a success. He believed electricity to be the coming power for industrial works, that is in all cases where it could be generated from water power. "In the works we are using compound Corliss steam engines, and find them very economical," said Mr. Derrick. "We can produce power from steam at \$27 per horse power per annum. If we were making new installations and could get electricity at \$30 a horse power per year, electricity would be used. Otherwise we would put in the latest in steam engines which have given good satisfaction."

ELECTRICAL

A New Type of Storage Battery Cell.

A NEW type of battery has been placed on the market recently by the Dayton Mfg. Co., Dayton, Ohio, who have been making storage batteries for many years. In this new battery the elements lie horizontally and are placed in a round glass jar. The grids are cast from lead containing a considerable percentage of antimony, which strengthens the grid and avoids warping or buckling. After the grids are pasted and the plates hardened by a special process, they are assembled into elements, the individual pieces being connected together by means of hard lead bolts about a half an inch in diameter. One-eighth inch square steel rod is cast in the centre of these bolts giving them great rigidity. The bolts are then made fast by lead nuts, which serve the double purpose of spacing the plates and holding them securely in place. Between the plates are placed thin sheets of porous separating material, these sheets extending about one-eighth of an inch beyond the edges of the plates. After the elements are assembled the edges of the plates and the nuts are electrically welded so as to insure perfect connection.

The horizontal position of the plates makes it practically impossible for the active material to fall from the plates, or to be forced out, due to the action of the gases which are formed, while the cells are being charged. The porous separators absorb about seven-eighths of the electrolyte required for normal discharge, so that in case a jar should break the flow of current will not be interrupted.

Electrical Purification of Drinking Water.

THE question of pure drinking water is a vital one, affecting as it does every class and condition of every community. Many methods for the purification of water are in vogue, which are more or less satisfactory. Recently electrical methods have been put to test, the results being fairly good. The matter was discussed at the International Electrical Congress by J. W. Langley, in connection with some experiments recently made.

He deals with the sanitary purification and notes that attempts to destroy bacteria by the direct action of electric charges did not result in any marked success. In an experiment milk was the fluid used and static charges as high as 150,000 volts from condensers were sent through 20 cubic centimeter sterilized vessels, but the milk so treated soured only six hours later than a sample of the same milk not electrolyzed. Sub-

We make Electric Fixtures, Sockets and Cut-Outs.

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

stantially the same results followed the application of alternating currents of 500 volts, having a frequency of 66 cycles, for ten minutes. It has long been known that electricity has a definite action on bacteria analogous to the chemical changes produced by electrolysis. As long ago as 1892 work on the purification of sewage mixed with sea water was carried out on a commercial scale near Yonkers, N. Y. Here the chlorine produced from the salt in the water was the germicide, the electrodes being carbon and iron plates. This process has also been recently applied in England, on the scale of nearly a million gallons a day, iron plates at both anode and cathode being used.

SUCCESSFUL METHOD.

The most successful method of electrolysis for drinking water is the use of aluminum plates as electrodes. A plant for this purpose is working commercially in Cleveland, Ohio. The electrolyzer is a rectangular iron box. The aluminum plates are held in grooves in a slate lining. The application of twenty amperes at 15 volts, or 300 watts, in the form of a continuous current, produced sufficient electrolysis to purify 500 gallons per hour of Lake Erie water. The water flowed in a continual stream from the city supply through the apparatus. The action is to produce aluminum hydroxide, which has long been known to combine with the coloring matter and most of the organic matter, and electrolyzes all solid matter, including bacteria and fungi. The water issuing from the electrolyzer is milky from suspended aluminum hydroxide, and passes to a filter filled with crushed quartz, which arrests the solid matter. The effluent from the filter is colorless and of great brilliancy. Chemical analyses show the albumen to be greatly reduced, usually upward of 75 per cent., and is brought down within the limit specified by the Michigan State Board of Health, which calls for a greater degree of purification than is generally called for by other states.

EFFECT ON WATER TREATED.

The action on the bacteria is very satisfactory. These are reduced on the

average 97 per cent., and several analyses have shown a reduction of over 99 per cent. Moreover, those which pass the filter are of the harmless water type, for in no instance of six months of

terial tests. The electrolysis evolves much hydrogen and a smaller portion of oxygen than the two to one ratio due to the composition of water, as the apparatus is under the city pressure. These gases are partially dissolved so that the purified water is more fully treated than the original lake water, which adds greatly to its palatability and to its hygienic value.



Copper Percolator on Electric Heating Table.

continuous commercial operation has a single colon bacillus been found, although the lake water generally contains them. This result has been substantiated by weekly and semi-weekly bac-

Laurier or Borden!

An attractive campaign button has been placed on the market recently by the Sayer Electric Co., Montreal, that is attracting considerable attention. A button of either of the leaders depending on the political bias of the party wearing it, is placed on the lapel as with an ordinary button. In this case, however, at the will of the wearer the button is illuminated from underneath by a miniature electric lamp and being semi-transparent shows up quite brilliantly. The accompanying battery and electric light may be had from the above firm for \$1.35. The battery could be used for other purposes after the campaign is over.

Gas Supplies



Gas Pillars
\$1.25 per gross.



Gas Brackets
No. 100, Stiff Bracket - 18c.
No. 104, Single Swing Bracket - 29c.
No. 105, Double " " - 48c.



Aluminum Gas Tips
\$3.00 per gross.

Lava Gas Tips
\$1.10 per gross.

These Prices Net to the Trade Only.

FOR EVERYTHING ELECTRICAL WRITE TO

The **Sayer Electric Co'y,** 10-14 Beaver Hall Hill
MONTREAL

HOT FOOT AFTER YOUR BUSINESS

We **know** you will be better off if you act as our agent for the distribution in your section of

INTERNATIONAL STOCK FOOD

We have stacks and stacks of proofs—letters from your fellow merchants—men who in many cases were a little hard to convince. Now they thank us heartily.

You have just as good a chance as they. You know of course that **International Stock Food** is the best and most desired, and most readily sold of any stock food made.

Write us for our proposal.

INTERNATIONAL STOCK FOOD CO.
TORONTO.

First:
Is it good?

Second:
What is there in it?

Colonial Stock Food

and

Colonial Poultry Food

are so good that there are no other foods offered to-day that touch them for genuine worth—a blunt assertion, but true. Then, too, there is more money in our make of foods than in any others worth buying. Two sound reasons for your acting as our agent.

Write for booklet and price list, and figure it all out.

COLONIAL STOCK FOOD CO.

79-81 WILLIAM STREET, TORONTO

CANADIAN CORDAGE & MFG. CO., Limited

CORDAGE

OF EVERY DESCRIPTION.

MANILA ROPE,
SISAL ROPE,
LATHYARN.

BINDER TWINE:

SISAL,
STANDARD,
MANILA.

All qualities and lengths, 500 ft., 550 ft., 600 ft., 650 ft. to the pound.

We guarantee our goods to be absolutely Pure and free from all substances calculated to increase weight. Consumers will find on careful test that our goods are the Most Economical, Highest quality, Low prices.

Wire, Write or 'Phone

Canadian Cordage & Mfg. Co.

Long Distance 'Phone 162

LIMITED

PETERBOROUGH, ONTARIO, CANADA



Our Agents
report O.K.

Men who are old stove dealers, and who are now selling

Empire Queen Ranges

are delighted with their trade so far. "Your stove is the most sensible, and from reports received the most satisfactory of any we have ever sold." Thus one man writes. Something most surely. Something worth looking into. Three words tell the story:

Appearance Economy Efficiency

SEND FOR OUR CATALOGUE.

The Canadian Heating & Ventilating Co.

OWEN SOUND, ONTARIO.

Limited

Window and Interior Displays

Timely Hints
and Suggestions

Treatment of the Window Dresser.

A HARDWARE store seldom finds it expedient to engage a professional window dresser, as is commonly done in the larger dry goods and departmental stores, but every merchant should select a clerk, whose duty it is to attend to and dress the windows. Even if there are many clerks who could fill the position, their talents should be placed at the disposal of one, who is at liberty to use or refuse them as he sees fit.

Choose the clerk whose artistic taste and ingenuity can be depended upon; place the window entirely in his charge, and give him the responsibility that will put him upon his mettle. Where one clerk is held responsible, he will see that the glass is bright, the display neat and clean, and will keep ever before his mind the next arrangement. It takes much time to plan a window, and there should be one man who has little else to think about.

Once the window dresser is selected, and the few rules which you may have decided to follow, explained, give him entire charge. If he is worth keeping he will not be above suggestions from any source; but do not, except in extreme cases, attempt to coerce him. No window dresser can get the effect he is after, when forced to adopt the detailed plans of another. He will feel interest enough in his work to do his best, and his experience will soon place his ideas above the plane of many of those emanating from an inexperienced man.

A few of the points to be insisted upon at the first are: (1) windows should not be used as bill boards, (2) display and glass should be kept clean, (3) goods should be injured as little as possible, (4) prices should be honest, (5) nothing should be displayed that is not in stock and (6) changes should be made at certain intervals.

Do not restrict the window dresser too much in the matter of expense of designs. A \$5 window may sell \$100 in goods. Do not get in a rage if some little injury is done the goods; it costs money to advertise. It might be found

advisable to set apart a certain sum each year or quarter for display purposes, only allow your dresser to use it in his own time and way.

And don't forget to praise him if his work is good, and to give him credit for an admired display.

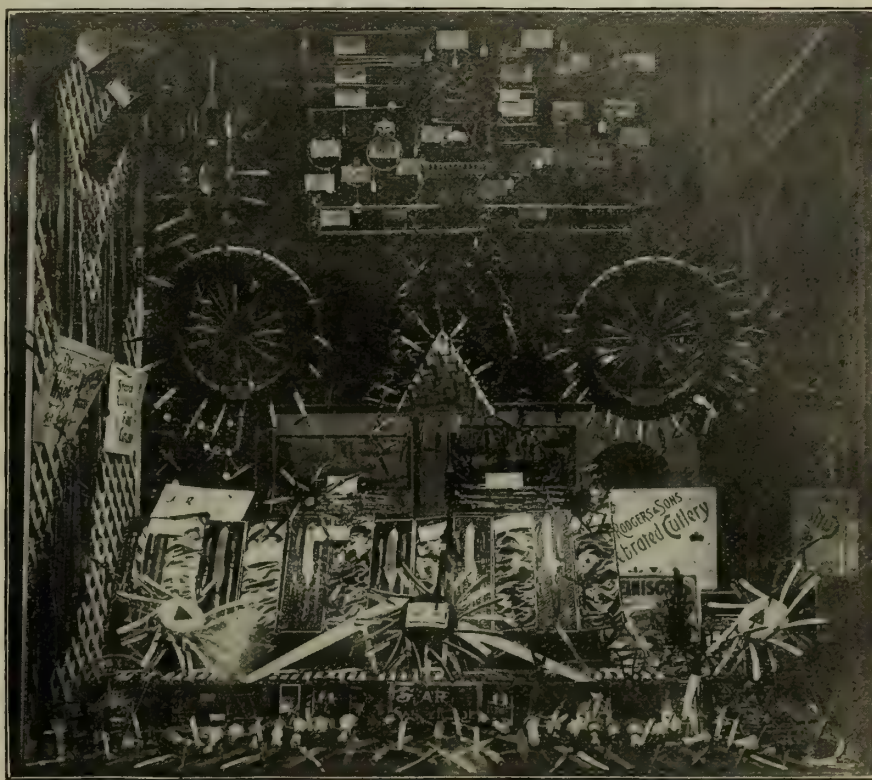
Let him confine himself to the window when in the act of arranging a display, and do not call him away to wait on a customer, or for any other reason. A disturbed window dresser does not give

Bronson, L. Crannel and E. A. Le Sueur, all of Ottawa.

An Excellent Cutlery Window.

THE Vokes Hardware Co., Toronto, have studied the art of window dressing to good purpose as will be seen by the accompanying illustration, showing a cutlery window by which they attracted considerable attention a short while ago.

The style of display followed is along



A Cutlery Window—Shown by Vokes Hardware Co., Toronto.

his best attention to a customer, and his plans are apt to miscarry. Treat him as an important part of the business, and his ideas will expand, his displays improve and the business prosper and increase.

The General Illuminating Co., Limited, Ottawa: capital, \$50,000; purpose, to generate and sell electricity and gas for light, heat and power. The directors are: E. H. Bronson, F. P. Bronson, W.

lines that have been referred to in this column already. Possibly the most effective part of the window is the arrangement of knives in the hoops, triangle and circular pieces of wood suspended from the ceiling.

A feature of the display that is also worthy of note is the assortment of plumbing fixtures, shown against a dark background at the rear of the window. The Vokes Co. are to be congratulated on their artistic and effective window displays.

Made in Canada

The steel rail mill of
The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.

is now in operation and turning out

A. S. C. E.
Standard
Section

STEEL RAILS

of
Highest
Quality

Your specification will have our best attention.

Offices:

Canada Life Bldg.,
MONTREAL.

100 King St. West,
TORONTO.

Drummond, McCall & Co.

General Sales Agents

The Algoma Steel Co., Limited

QUITA RANGE

A New, Light and Inexpensive Steel Range.

Burns Coal, Coke or Wood.

Has a three-piece expansion top, large drop broiler door, large end shelf, duplex grate which is reversible for coal or wood, large ash-pan, sectional leg base, interchangeable flush reservoir and a handsome high shelf.

The Quita, although a cheap range, has all the strong points of our better lines.

Burns Coal, Coke or Wood.



No.	Cooking Holes	Size of Oven, Ins.	Length of Wood Fire Box, Ins.	Shipping Weight, lbs.		Sq.	Tel. Code
				Sq.	Reser.		Ext.
9	4 9-in.	16x21	21	240	250	Canoe	Camlet

The McClary Manufacturing Co.,

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,
Montreal.

The MacLean Publishing Co.
Limited

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Dominion Linseed Oil Co., Montreal.
David Maxwell & Sons, St. Marys.
A. D. Fisher, Toronto.

THE SCRAP IRON MARKET.

In sympathy with the dullness in the pig iron market business in scrap iron has, during the present year, manifested much less activity than usual.

The Canadian pig iron market is always materially affected by the condition of affairs in the United States. Scrap iron, as a rule, follows the local quotations on pig iron. This year has been an exception, however, for scrap iron has, since the opening of navigation, been so cheap at New York that many Canadian consumers imported instead of buying on the home market.

The cause of the dullness on the United States market has been, on the one hand, overproduction, and, on the other hand, curtailment of consumption. For about a year there has been a restless, uneasy feeling as to the immediate future in the United States, partly due to the Presidential elections (always an unsettling factor, in the United States)

and partly due to a curtailment of business in the Western and Southern States.

Pig iron has been termed the barometer of business conditions and the fact that for a whole Summer a large proportion of the iron furnaces of the United States have been lying idle has been taken as convincing proof of the widespread reduction of business.

Every country in the world has experienced a depression similar to that in the United States, different only in degree. Canada has probably fared as well as, if not better than, other countries yet in the consumption of all metals there has been a material falling off in business.

Canadian pig iron furnaces have been kept idle for a considerable part of the year yet there has been a steady, though always limited demand for their product.

Scrap metals, however, have been in extremely small request, and the dealers have found it advisable to hold stocks rather than sell at a price in competition with import offerings. In fact, some of them imported heavily rather than accept iron on the home market at prices asked here.

During the last month or so there has been a great strengthening of the situation. There has for weeks been a steady expansion of demand in the United States with the result that consumption exceeded production and most of the furnaces have again been started. This improvement has naturally affected the price of both pig iron and scrap iron in the United States, a steady upward movement being the result.

The improvement of conditions in the United States is bound to have an effect on Canadian conditions. Already the situation has brightened as regards pig iron. The consumption is sufficient to absorb the entire Canadian production and to make possible an advance of 25 to 50c a ton as compared with former weeks in pig iron on the local market. The scrap iron market is bound to follow to a higher level very soon. At present, owing to the heavy importation and the accumulation of domestic scrap the stocks held in Canada at the

moment are unusually large. On the Toronto market there is an especially large stock of "pipe" quality, an inferior grade of iron secured from the ruins of the big fire in that city last Spring.

Prices of scrap iron have since Spring ranged from \$1 to \$2 lower than a year ago. During the last fortnight there has been an upward movement though the only change to date is an advance of 50c to \$1 in machinery cast and No. 1 wrought scrap.

FAIR CANADA IN DEMAND.

MISS CANADA has arrived at an age when Uncle Sam thinks he may with due propriety pay court to the fair damsel in the person of his sons. The action of the Democratic party therefore in adopting a strong reciprocity plank in its election platform must be construed in a sympathetic frame of mind. Not to be outdone by their Democratic brethren the Republicans have also inserted a reciprocity plank, which is nothing more nor less than a copy word for word of the Democratic pronouncement on the question. Both parties now stand committed to reciprocity as their national policy in the following words: "We favor liberal trade arrangements with Canada and with peoples of other countries, where these can be entered into with benefit to American agriculture, manufactures, mining or commerce."

The chapter devoted to the subject of reciprocity in the campaign book issued by the Democratic party quotes statistics from authorities of both countries showing that at whatever period reciprocity has in the part been in operation the United States was the gainer. After pointing out the exact trade situation as it exists at present between the United States, Canada and Great Britain, the opinion is expressed that in the fulfilment of the Chamberlain propaganda lies a menace to American farmers and commerce generally.

The campaign document also pays the following glowing tribute to Canada: "This great country is one of the larg-

est and finest on the globe. It is little inferior if at all to the United States in the vast variety and value of its resources. It is surrounded and indented by seas that teem, to a degree beyond all others, with the wealth of ocean, which in conjunction with its mighty system of international transportation afford a splendid basis for maritime and commercial enterprise. Nothing but the most unexampled lack of foresight could countenance indifference to the commercial possibilities between the two countries."

It goes on further to say that the deliberately selfish policy of the Republican party in wringing from Canada such profits as might be gathered without giving anything in return has cost the United States the respect and almost the friendship of the nation to the north and that the time has now come for the correction of this error and the establishment of closer international relations in the matter of trade and commerce.

That the United States has everything to gain and nothing to lose by reciprocity with Canada is a self-evident fact, owing to the opportunity it would afford the American consumer of purchasing freely Canadian food products and raw manufacturing materials.

Although susceptible to a degree Canada is not likely to fall a victim to the blandishments of her new courtiers, unless she sees something redounding to her advantage. Owing to the indifference of these same individuals in the past she has "sought and found" in other fields and pastures green, and at the present time her attitude cannot be said to be altogether friendly to the above-mentioned gallant proposals. The proposers are keenly alive to the seriousness of the situation, and are sparing no efforts in their endeavor to win what maybe they have irrevocably lost.

ENCLOSURES.

SOME merchants manifest considerable thoughtlessness in their attitude to enclosures. When warehouse of one wholesale house is convenient to another it is a simple and agreeable courtesy for the former to send over to the

latter a parcel to go with a larger order he is sending to a customer. But when the wholesale houses are situated a couple of miles or more apart the courtesy is one that should not be asked unless the enclosure desired is one of some value, unless it yields the wholesale dealer a fair margin for his trouble.

A Toronto wholesale house instanced to the writer three cases where he had been asked to send comparatively unimportant parcels yielding 10 or 15c profit to other dealers whose warehouses were each at least three miles distant from his own. In each case the loss of sending over the enclosure was much greater than any returns from their sale.

Other retailers are more thoughtful regarding this matter, but do not seem to take into consideration the difficulty the wholesale houses find in making satisfactory connections. Some of the wholesale houses have reduced to a system their treatment of enclosure business. When an order to be sent by enclosure comes in it is first filed; then connections are made with the house to whom the package is to be sent and arrangements are made for its delivery at a satisfactory time.

Sometimes when such inquiries are made it is found that the package has gone. In such case the customer is written to at once about the matter.

Yet despite these precautions there is often failure in making connections. In such cases the courtesies of business demand that the retailer should hear the explanations offered before expressing, or even feeling, annoyance with the wholesale houses affected.

CANADA AN EXAMPLE.

CANADA has a new role to play, namely, that of preceptress to the nations of the east in the science of agriculture. Most of the colonies have recognized her claim to be the "Granary of the Empire," and are already emulating her example, the latest convert being the Orange River Colony, which wishes to effect a thorough reorganization of its staple industry and to that end is recruiting from our agricultural colleges experts in Canadian methods of farming.

It is particularly gratifying to hear that Mr. Palmer, recently appointed di-

rector of agriculture for the Orange River Colony, is giving the utmost satisfaction, and that he promises to be a living example of what Canadian agricultural colleges can produce in the way of practical, scientific and technical equipment.

AIDING BRITISH EXPORTERS.

A GOOD example has been set recently by some of the Canadian importers which, if generally followed, would go a long way to enlighten British exporters and dispel the doubt and uncertainty existing there regarding the latest changes in the Canadian tariff laws. A notice, in the form of a letter, is being sent by some jobbers to all the British firms with whom they deal informing them to the letter of the requirements necessary, and they are not a few, in fulfilling the law when sending goods to this country. Although no doubt the British importer is already aware of what is required of him in this direction to a certain extent at least, and more or less vaguely perhaps, yet a letter sent, as the one mentioned, coming from a customer, is going to bring the matter before him more prominently and in a more definite manner than would be possible of accomplishment in any other way.

The form of the declaration to accompany all invoices is given in full, in six clauses, as called for by the Dumping Act, with a note added regarding German goods. Below appears an invoice form, such as is required by the department, and underneath the specific directions regarding triplicate invoices, addressing and marking of packages, inserting extra goods, bills of lading, etc., concluding with the request that all regulations be carried out. If this practice were more generally observed it would doubtless do away with a lot of inconvenience and delays that at present exist. The British jobber or manufacturer would probably not appreciate such a letter, as far as the notice itself is concerned, but will recognize the spirit in which it is sent, and that it was instituted with a view to helping both parties and to obviate the vexatious delays attendant upon the non-fulfillment of the required regulations.

HIDES AND WOOL SITUATION.

THE Canadian market for wool, hides and skins at the present time may be said to have reached the highwater mark. In wool the tendency has been steadily upward during the past three years, present prices being the highest since 1898. Many factors have been influential in bringing about this state of affairs, among them the absence of a surplus of wool in the world's markets the war between Russia and Japan which has increased the demand for military supplies, and the comparatively small and steadily decreasing crop of Canadian fleece wool.

The hide situation is similar. Supplies are being readily taken up at home and abroad and prices ruling to-day are higher than they have been at any time since 1900. The outlook is for a fairly steady market since tanners will consume the output as fast as it arrives on the market. At the same time there is the possibility that if the price of leather does not advance a large percentage of tanners will be obliged to curtail operations or perhaps shut down, thus throwing a great many hides on the market. These remarks are equally applicable to calfskins.

The price of sheepskins is influenced directly by the wool market. Owing to high prices and scarcity ruling in the latter there has lately been an active inquiry for sheepskins. In fact quotations on this article have become somewhat exaggerated and working margins for both dealer and puller reduced to a minimum.

Until three months ago the price of tallow was below the normal. During the interval, however, there has been a decided improvement and two weeks ago prices reached a record mark. Since then there has been a slight decline with the market at the close so uncertain that it is impossible to forecast prices.

WILL MANUFACTURE RADIATORS.

FOR some time the rumor has been current that the Taylor-Forbes Co., Guelph, Ont., had decided to manufacture radiators. To give authoritative news to our readers Hardware and Metal wrote to the company for information regarding the matter. In their reply they state:

"We have decided to manufacture radiators and hot water and steam heating boilers, and cast iron fittings. We will also handle a complete line of steamfitters' supplies, such as steam pipe and valves. We are at the present time building our plant, and this is well under way. It will be of steel construction, built by the Hamilton Bridge Co. We are also building our machines and patterns, and these are well advanced.

"This department will be under the personal supervision of the writer, who has had some experience in these lines, and associated with us in the mechanical department is Mr. J. P. Hockin, formerly superintendent of the Dominion Radiator Co., who is without exception the best designer of special tools for such work in America.

"We enter the field for the reason that we know there is room at the top, and no place but the top will suit us. With our experience in the business, and our knowledge of the requirements of the trade, and our ability to design new features in radiation, we are satisfied that our venture will meet with the approval of the heating trade. This department will be entirely separate and distinct from our hardware section."

Those who know John M. Taylor and the other members of the Taylor-Forbes Co. will readily agree that his firm is bound to be a factor in any line they manufacture and that, in all probability, they will make a greater success of the radiator business than they have of their hardware manufacturing business.

ONTARIO PLUMBERS' CONVENTION

THE semi-annual convention of the Ontario Master Plumbers' Association will be held on Thanksgiving Day, Thursday, November 17.

Members are requested to note that the place of meeting has been changed from Peterborough to Toronto. The reason for the change is that this meeting is likely to be a most important one, so that a full representation is requested and Toronto offers better railway facilities for the Western Ontario delegates, who always constitute the larger proportion of the visiting members.

The meetings will be held at the rooms of the Toronto association, Richmond street east. A banquet will probably be given the visitors, a number of whom will most likely be accompanied by their wives and families, and so a social as well as a business nature will be imparted to the proceedings.

The Toronto association have already started preparations for the meeting. Further particulars will be given in next week's issue of Hardware and Metal.

WILL ERECT LARGE CAR SHOPS.

W. P. COLEMAN, president of the recently formed, Canada Car Company, announces that a large plant will be erected at once near Montreal, to be in operation early next Summer. The plant will comprise the best features of the plant of the Pressed Steel Car Company. Being a combination arrangement, it will be capable of turning out wooden cars, steel cars and composite wood and steel cars. It will have a capacity of twenty-five wooden cars, fifteen steel cars and fifteen passenger coaches a day. Besides this the works will have a capacity for steel underframes for twenty-five cars a day and thirty or forty steel truck frames. The buildings will cover 360,000 square feet. The big plant running to its full capacity will handle between 500 and 600 tons of material a day, will employ from 1,500 to 2,000 men, with a pay roll of from \$75,000 to \$125,000 a month. This will mean a turnover of \$8,000,000 a year. Everything required will be made on the premises except the raw material, lumber and steel.

WILL MAKE SAWS IN CANADA.

Henry Disston & Sons, probably the oldest saw manufacturing firm in the United States, have been negotiating for the establishment of works in Canada for some time. In reply to an inquiry from Hardware and Metal regarding their proposals they state: "The location of the place we expect to start our Canadian plant is Toronto, not Hamilton," as had been reported in the daily press.

THE JOHN BOWMAN ESTATE.

A meeting of the creditors of the John Bowman Hardware and Coal Co., London, Ont., was held in London on Thursday. The sale of the stock at 70c on the dollar to Wm. Bowman, father of John Bowman, was consummated. The proceeds will be divided in the usual way by Assignee James Hardy among the creditors. The liabilities were \$112,901, the assets \$96,234.

CLARK & DEMILL'S NEW SHOPS.

Clark & Demill, Hespeler, Ont., manufacturers of woodworking machinery, have given the contract for their new shops to W. A. Kribs. A main building 212 1-2x67 with portable ends, to allow for enlarging at some future date, and boiler house 24x28 will constitute the plant.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Oct. 28, 1904.

Hardware.

NOVEMBER 15th marks the date of the advance in freight rates, and it is assured that from now until then a very large turnover in hardware will take place. The conditions existing are about the same as a week ago. Just now manufacturers are working to their utmost capacity to keep up with the demand, and jobbers' staffs are busy overtime in order to look after the unusually large trade that is being done. Stocks are in good shape and retailers have little to complain, in as far as receiving goods in good time is concerned. Besides an active trade in general hardware, Fall lines are in big demand. Nails are not particularly active, but shelf and heavy hardware are seeing a big turnover. Skates, shovels, sleigh bells, and lanterns are very brisk, but the demand for shot guns, rifles and ammunition has fallen off somewhat. There are no changes in price this week.

Carpet Sweepers—Trade continues good. Quotations made last week still hold. We quote, \$21 to \$30 a dozen.

Sewing Machines—As noted last week, both hand and complete sewing machines are in splendid demand. Our quotations are: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Food Choppers—Orders for these are still coming in in large numbers. We quote as follows: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Corn Cutters and Huskers—For many weeks this has been one of the active lines in the hardware trade and business still continues good. We quote as follows: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Agricultural Wrenches—These are not in as active demand as some time previously. We quote: 6 inch, \$2.85 a dozen; 8 inch, \$3.15; 10 inch, \$3.75; 12 inch, \$4.40; 15 inch, \$7.50 a dozen.

Skates—The rural trade in particular

is calling for a large quantity of all sizes of skates, so that this line is one of the most brisk at present. Our quotations are as follows: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Lanterns—The stock of these is in good shape, although it was reported otherwise and business in them is good. We quote as before: Cold Blast, \$7; No. 0 Safety, \$4 a dozen.

Sleigh Bells—The activity of a fortnight ago seems to have been resumed once more in this line, making it one of the best sellers. Quotations are: Brass team bells, rough, \$1.80 to \$4.50 a doz.; polished, \$2.10 to \$5 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—The snow shovel trade is now well under way, and in a very satisfactory condition, the demand having increased materially within the past two weeks. We quote: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Heavy Screw Hooks and Hinges—These are somewhat more active than a week ago, but as yet by no means brisk. Our quotations are as follows: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—Considerable annealed wire is being called for at present for hay pressing purposes, but the demand is not large compared with what it

was earlier in the Fall. We quote \$2.25 per hundred pounds.

Barb Wire—Very little activity exists in barb wire and hardly any orders are coming in at present. We quote \$2.75 per 100 lbs, f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Car lots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—The market is dull with little prospect of a revival until Spring. Prices remain unchanged. We quote as follows: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 and 8, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—As noted last week there is very little activity in fence staples. We quote: \$2.65 per 100 lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—Trade is somewhat more active this week and prospects for a bigger volume of trade are better. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—The supply of these does not seem to have caught up with the demand, which is, as usual, fairly good. Discounts are as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—These have been unusually active within the past week and very large sales of all sizes are reported. We quote: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60

per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; black bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—No readjustment has taken place in the wire nail situation, and there seems no effort on the part of those concerned to alter the situation. The supply is still none too large and as was mentioned in this place last week, it is useless quoting prices as they are the result of individual bargaining with the jobber.

Cut Nails—There is no particular activity in cut nails at present. The cutting of prices continues, but we quote as before, \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Horseshoes—Manufacturers are busy to keep up with the demand, which is unusually good. Nearly all sizes are being called for and large orders are received for shipment before the change in freight rates. Our quotations are as follows: "P.B." new pattern, base price \$3.50 per 100 lbs; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—The supply of these is good and the demand is exceedingly brisk. Our quotations on list price are: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22s; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. "P. B." brand 55 and 5 1-2 per cent. off list.

Other brands, 55 and 60 per cent. off list.

Shot Guns and Rifles—This has been a good season for sporting goods of all kinds and shot guns and rifles in particular. Sales have fallen off somewhat, however, within the past week, and the business season for these is about over. Prices remain the same and are to be had on application.

Ammunition—There is still a shortage of No. 16 gauge shells, while the supply of all other sizes is good, there is a fair demand. Prices remain unchanged. We quote: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand.

Shot—Business is hardly as brisk, but continues fair. We quote: Standard, \$6.50 per 100 lbs.; chilled, \$7 per 100 lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—A better business is reported in building paper, than was the case last week. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—Sales have fallen off considerably and the volume of business now being done is not large. We quote: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c, for 3 and 4-ply bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement and Firebrick—The wet weather recently has had a very deteriorating effect on the cement and firebrick business. Dealers had hope, with fair weather, for a big trade, but have been disappointed as very little stock is moving. We quote: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—A tendency towards lower prices is experienced, while business is dull. We quote: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3, one inch, \$2.95.

METALS.

Strong as was the metal market a week ago, in nearly all the metals quot-

ed even greater strength prevails, and a further upward tendency in prices is noted this week. The outlook is particularly good, and the ordinary demand improving, and for the most part activity prevails. While pig iron is quiet, with little moving, bar iron, tool steel, merchant steel, cold rolled shafting, and Canada plates are extremely active. There is no actual change in prices, but in the sterling market, galvanized iron has advanced ten shillings a ton, tin plates 1 1-2d per box, and higher local prices in both may be looked for soon. Sheet zinc and zinc spelter are both firmer, with an upward tendency. The copper market has strengthened during the week. In scrap metals some copper and brass have been shipped to England, but the market is quiet.

Pig Iron—Little pig iron is being brought to this country at present, as stocks are pretty well filled up. There is only a moderate amount of business being done. We quote:

"Disc," No. 1.....	\$17.50 delivered Montreal
"Dom.," No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 " "
Glenarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	\$19.00 delivered Montreal
(special).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.90 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "
No. 1 Cleveland....	17.00 " "

Bar Iron—Unusual activity exists to such an extent that manufacturers can scarcely keep up with the demand, so that there is a scarcity in several sizes. We quote: Merchants' Bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2 net cash thirty days.

Tool Steel—A much better feeling prevails this week and more activity is reported. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jesop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c; Conqueror High Speed steel, 60c.

Merchant Steel—More merchant steel is moving than for some time past, and a still brighter business is anticipated. We quote as follows: Sleighshoe, \$1.77 1-2; tire, \$1.87 1-2; Spring, \$2.75; toe calk, \$2.37 1-2; machinery (iron finish), \$1.97 1-2; square harrow, \$1.87 1-2; reeled machinery

steel, \$2.75; mild, \$1.77 1-2; rivet, \$1.82 1-2. Net cash thirty days.

Cold Rolled Shafting—The repairs and new installations going on throughout the country are creating a good demand for this line. Our quotations are as follows: Cold rolled steel shafting 3-4 in., to 17-16, \$3.85 per hundred lbs.; inch and a half to 3 inch, \$3.50 per hundred lbs.

Canada Plates—No change in prices is noted this week, but there is evidence that within the near future advanced prices will be quoted. The demand is brisk. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—Within the past week no change in these has been experienced. The market is firm and the demand steady. We quote: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—There has been an advance in galvanized iron on the sterling market of 10s a ton, and although our prices are quoted the same as last week, they will probably be changed shortly, as the advance in the primary market will have its effect in local circles. There is a large amount of business being done at present. Our quotations are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95. In less than case lots, 25c extra.

Sheet Zinc—No advance has been made in the price of sheet zinc, although it was anticipated last week that such would be the case. The market is very firm and active and prices quoted are firmly maintained. We quote as before: Case lots, \$6.35 to \$6.60, and small quantities \$6.60 to \$6.85.

Tin Plates—Tin plates are showing a stronger feeling and in addition to the slight advance noted last week, there is another increase in the primary market. The local price remains the same, with every indication of an early advance. The market continues active with good

stocks on hand. We quote: Cokes, \$3.75; charcoal, \$4.

Ingot Tin—No further advance is noted this week, but the price of 31 1-2c quoted is the minimum, and nothing is being sold at less than that. We quote 31 1-2 to 32c, the former price being for quantities only.

Ingot Copper—The market is stronger and fairly active. No further advance is noted, although there is an upward tendency. We quote: 14c and 14 1-2c per lb., the former price being for quantities only.

Ingot Zinc—Little stock is moving. The market is firm with no change in price. We quote: 53-4c to 6c. The former price being firmly held for quantities only.

Pig Lead—The market is still advancing. It is fairly active and an increase may be looked for shortly. We quote: \$3.35 to \$3.45, no concessions being obtainable on the former price.

Scrap Metal and Old Material—There has been little change in the scrap metal market recently, copper keeps firmer and a small quantity of copper and brass are being shipped to Great Britain, together with some woollen rags. There is a deadlock in the rubber market, owing to the fact that the dealers consider the price offered by manufacturers to be altogether too low, so that stocks are being held in anticipation of a further advance. We quote as follows: Heavy copper and wire, 11 1-2 to 12c; light copper, 10 1-2 to 11c; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 1-2 to 8 1-2c; light brass 5 to 5 1-2c; lead, 2 1-4c; zinc, 23-4 to 3c; iron, No. 1 wrought, \$11; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs; old rubbers, 5 1-2c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front Street East,

Toronto, Oct. 28, 1904.

Hardware.

A RUSH of orders is going out in order to take advantage of the Summer freight rates which continue only until November 14. A steady market is reported with an upward tendency in some lines which were reduced as a result of the fall in iron and steel prices. In all materials used in building operations there has been an unusually heavy business this season. Building paper, cement, stoves, etc., have been bought in exceptional quantities, especially on

Northwest account. There seems to be a general improvement in prospects as orders for Fall goods are well up to last year's volume. No changes in prices are reported.

Lawn Mowers—The trade are generally interested in this line and orders are starting to come in nicely. Prices for 1905 are as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discount 50 per cent. with freight concessions in quantity shipments.

Guns and Ammunition—There is still a good movement in anticipation of the deer hunting season.

Washing Machines—Our quotations are as follows: Round reacting washer, per dozen, \$56; square reacting washer, per dozen, \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72; Capital, \$42; Magic, \$25; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Chain—We quote as follows; 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Clothes Reels—The Davis (W. L. Co.), 40 per cent. off list.

Barb Wire—Orders for future delivery are being taken. We quote \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—Some business is doing with prices steady as below: No. 5, \$3.45; Nos. 6, 7, and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Inquiries continue regarding prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required. Strong, High Silicon Iron for Foundry Purposes.

"MIDLAND"

BRAND.

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

Drummond McCall & Co.
MONTREAL, QUE.

or to

Canada Iron Furnace Co.
MIDLAND, ONT. Limited

We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

to other points up to 25c; earlots, \$2.65; freight allowance to 20c.

Wire Nails—Cutting continues in all parts of the country and some very low prices are heard of. A nominally fair quotation would be about \$2.25 per keg f.o.b. Toronto, with car loads at \$2.20.

Cut Nails—There is still a fair business doing though prices are comparatively firm. We quote: \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are "C" brands, 40, 10 and 7 1-2 per cent.; "P.B." brands, 55 to 57 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—The volume of business in screws keeps large. Prices are steady. We make the following quotations: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Prices have been confirmed. A good business is doing. We quote as follows: Iron rivets, 60 and 10 per cent. discount; iron burrs, 55 per cent.; copper rivets with usual proportion of burrs, 45 per cent.

Bolts and Nuts—Manufacturers are calling for an increased number of bolts and nuts. Prices show no change. We quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Woodenware—We quote: Tubs, No. 0, \$11.25; No. 1, \$9; No. 2, \$8; No. 3, \$7; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c;

IRON STEEL and METALS

Close prices to wholesale buyers only.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

Anti-Freezing Pumps

will soon be in demand.

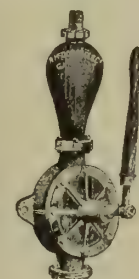
You ought to lay in a stock on our

Standard
Anti-Freezing Pumps

before the cold weather sets in.

They are the best line you can handle because your customers will be perfectly satisfied when they find their pumps will work on a zero morning.

Write for catalog and prices
THE R. McDOUGALL CO., LIMITED
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"ALPHA"

HIGH SPEED STEEL
Crucible Cast Steel
for Tools of all kinds.

"B.C." Miners' Drill Steel

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NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

6 dozen packages (12 to case), 95c.

Cordage—Business is being well booked up for rope and the jobbers are preparing for the binder twine trade for next season. Our quotations are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sasheord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2c to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Cement—Owing to the high freight rates there is practically no Belgian or English cement on this market. The demand both outside and local continues to be good and the outlook is for a continuation of these circumstances till Winter sets in, with an advance in prices after navigation closes. Present prices are unchanged. We quote: Canadian Portland, \$1.70 to \$2.00; English \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex store; American Portland, \$1.70 to \$2.00 f.o.b. Toronto.

Firebrick—As the season for repairing is drawing near, a strong demand is anticipated by the dealers during the next month. At present conditions continue unchanged. The outlook is for a change in prices after navigation closes. We quote the following: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Building Paper—Trade conditions are unchanged and will in all probability continue so until the Winter weather sets in. The demand at the present moment has never been equalled in previous years. A change in prices is not likely to occur till December. We quote: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slater's felt, 60c per roll.

METALS.

As pointed out in recent issues the Canadian pig iron market has been rapidly gathering strength for some weeks. As a consequence the Midland furnace production is considerably oversold and this iron is not in the market



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs, Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.



BALL BEARING CASTERS

Tool Steel Balls and Frame.



Send for Specialty Section of the "Green Book of Hardware Specialties."

Utica Drop Forge & Tool Co.

Mfrs. of Nippers and Pliers.

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294 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL, ALLEN C. JENKING, Canadian Manager.

GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, MONTREAL

Brand Galvanized Sheets

Uncommonly good at an uncommonly low price. Every sheet is guaranteed

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.

Page "Acme" Poultry Netting

This is the only netting that can be erected without puckers, bags or wrinkles in it. The selvedge wires being of straight smooth wire, the web can be adjusted smoothly and evenly along the edge and centre wires.

Notice that this netting has a large wire running through the centre (except in the 24-inch) which adds much strength to the web and enables it to hold its shape.

With Acme netting no boards at the top are necessary, and posts can be placed long distances apart.

The netting is very close at the bottom, the meshes being only 1 1/4 inch; at the top they are 3 inch. This makes it as effective as netting of 1 1/4-inch mesh throughout, and the cost is much less.



THE PAGE WIRE FENCE CO., Limited

WALKERVILLE MONTREAL ST. JOHN

at the moment. Hamilton iron is 25 to 50c a ton higher. Other iron and steel lines show great strength. Copper, tin and lead continue firm as a result of strong primary markets. There is an excellent trade.

Pig Iron—The situation in the United States and Great Britain shows a continued upward movement. In sympathy with this prices are steadily stiffening here. As the furnaces are well sold

up our quotations are largely nominal:

Midd sboro, f.o.b., Toronto.....	\$18 90
Hamilton, No. 1.....	\$18 00 to 18 25
" No. 2.....	17 50 to 17 75
" No. 1, Hamilton.....	17 00 to 17 30
Midland, No. 1.....	17 00 to 18 00
" No. 2.....	17 00 to 17 25
" No. 1 f.o.b. Midland.....	16 25 to 16 75
Radnor, f.o.b. furnaces.....	27 50
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—The upward movement continues and prices are firm as below: \$1.80 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length

while rolling, 2 feet and over, 10c per 100 lbs.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—The consumption seems to be increasing. Prices are firm. We quote: "M" self-hardening, 50c; "Alpha" high speed, 65c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10 to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—The British market continues to strengthen. Locally there is no change from 30 to 31c, being the general quotation.

Galvanized Sheets—Prices are firm. A good business keeps up at the prices noted. Our quotations are as follows: Queen's Head, \$4.00 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.00 for 28 gauge; Gordon Crown, \$4 for 28 gauge.

Tin Plates—An excellent demand continues, with prices steady. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.40; half-polished, \$2.50; and all-bright, \$3.30.

Copper—Last week's advance is well maintained. We quote in ton lots as follows: Ingot copper, \$13.50 to \$13.75, and sheet copper \$20 per 100 lbs.

Brass—This market is more active this week. Discounts are steady at 15 per cent.

Lead—A steady trade continues. We quote: \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—There has been a falling off in demand during the week. Prices are from 53-4 to 6c per lb.

Solder—This market has picked up and is active. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping, 16 1-2 to 17c.

Old Material—General conditions of the market continue unchanged, although one or two items have brightened to an appreciable extent during the week under review. Scrap zinc is firm and for

a large supply of No. 1 new scrap 33-4c could be paid, but for the general class of scrap no more than 31-2c is paid. Trade in old rubbers is easier and the outlook is for a decline in price. Machinery cast scrap and No. 1 wrought have become firmer. At present there is a good foreign demand for light copper. Scrap iron is beginning to move a little better and dealers are looking forward to a rushing business. With the exception of No. 1 wrought and machinery cast scrap prices continue unchanged. We quote: Heavy copper and wire, 103-4c per lb; light copper, 93-4c per lb; heavy red brass, 91-4c per lb; heavy yellow brass, 7 to 71-2c lb; light brass, 5 to 51-2c per pound; tea lead, \$2.20 per 100 lbs; heavy lead, \$2.40 to \$2.50 per 100 lbs; scrap zinc, 31-2c per lb; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$2; machinery cast scrap, \$10 to \$12.50; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 51-2c per lb; country mixed rags, 65c per 100 lbs.

PETROLEUM.

Refined—As large orders are always sent in before navigation closes, the demand for both home consumption and export is good. The outlook is for brisk trade and steady prices during the next two weeks. Prices are unchanged. Our quotations are: Refined Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 18 1-2c ex warehouse.

Crude Oil—Trade conditions of crude oil are unaltered. Prices remain the same. Our quotations are as follows: Pennsylvania, \$1.56; Corning, \$1.41; Newcastle, \$1.43; North Lima, \$1.05; Tiona, \$1.71; South Lima, \$1; Whitehouse, \$1; Somerset, 51c; Indiana, \$1; Canadian, \$1.53.

Hides, Tallow, Skins and Wool.

The tallow market continues dull, with prices in foreign markets weakening. The outlook in tallow is not at all satisfactory. Supplies of wool and hides are only fair and the market is brisk with active demand. Prices remain unchanged. We quote the following prices:

HIDES

No. 1 green steers, per lb.....	0 09
No. 2 green, per lb.....	0 08
No. 1 green, per lb.....	0 03
No. 2 green, per lb.....	0 07



FIRE-PROOF GLASS WINDOWS.

They give absolute security—resisting intense fire heat, as well as the action of water.

Arranged to open with this "fusible link" attachment, they close and lock automatically if a fire occurs—150° melts the link—thus giving complete and perfect protection.

This "wired glass" admits the light as freely as plain glass—is rather ornamental in effect, and greatly lessens insurance rates.

Full information if you write
METALLIC ROOFING CO.,
 Wholesale Mfrs. **LIMITED,**
TORONTO, CANADA.

CALFSKINS.

Veal skins, No. 1, 6 to 12 lb. inclusive.....	0 10
" " " 12 to 15 lb. ".....	0 08
" " " 15 to 20 lb. ".....	0 09
" " " 20 to 25 lb. ".....	0 07
Lamb skins.....	0 80

TALLOW.

Rendered Tallow, per lb.....	0 41 0 04
------------------------------	-----------

WOOL.

Unwashed wool, per lb.....	0 12	0 13
Fleece wool, new clip, per lb.....	0 20	0 21
"Rejections".....	0 15	0 16
Fuller wools, super, per lb.....	0 20	0 22
extra ".....	0 21	0 23

LONDON METAL MARKET.

From the Metal Market Report, October 27, 1904.

Tin—Spot tin opened firm at £131 5s, futures at £130 5s, and after sales of 100 tons of spot and 80 tons of futures closed firm at £131 10s for spot and £130 10s for futures, making price as compared with a week ago 10s lower for spot and unchanged for futures.

Copper—Spot copper opened firm at £60 15s, futures at £61, and after sales of 350 tons of spot and 250 tons of futures closed firm at £60 17s 6d for spot and £61 3s 9d for futures, making price as compared with last week 16s 3d higher on spot and 18s 9d higher on futures.

Lead—The market closed at £12 7s 6d, making price as compared with a week ago 2s 6d higher.

Spelter—The market closed at £23 10s, making price as compared with last week an advance of 7s 6d.

WRITE FOR PRICES AND DETAILS

Merrick, Anderson & Co.

NORTHWEST DISTRIBUTORS

WINNIPEG.

"Hot Blast" Line for Coal.

For Soft, Hard or Lignite Coal, Coke, Etc.

Made by the D. Moore Company,
of Hamilton.

STRATHCONA HOT BLAST

KNOWN EVERYWHERE.

MANITOBA DEPOT

Merrick, Anderson & Co.

117 Bannatyne St. East, - Winnipeg.



STRATHCONA DOUBLE HEATER

No.	Diameter of Body.	Approximate Shipping Weight.
1115	15 inches.	134 pounds.
1118	18 "	174 "

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL
Room 515 McIntyre Block,
Winnipeg, Oct. 24, 1901.

A FIRST crop report of Manitoba and the Territories, to be issued by Mr. F.B. Fowler, of the Northwest Grain Association Dealers, was published yesterday and indicates that despite the sensational reports of rust, frost and delayed harvesting the yield this year can truly be said to be a bumper one. Mr. Fowler estimates the total yield of wheat at 59,957,190 bushels on an average of 3,420,411 acres, an average yield of 17.5 bushels. This compares with the gentleman's estimate at this date last year of the production for 1903, of 52,909,740 bushels, on an average of 3,223,663 acres, an average yield of 16.1.

* * *

The Manitoba Iron Works, Limited, report a very busy season during the past Summer, in which they have in addition to their regular large business in boilers, engines, sawmill and elevator machinery and general foundry work supplied the structural steel and XXX cast iron work to the following buildings:—Occidental Hotel, Wilson Block, Zion Church, Young Liberal Club, Dominion Express Stables, Pulford Block, Steele Furniture Co., Avenue Block, Ashdown Improvements, Miller and Morse Block, Allman Block, Hood Block, North Fire Hall, Bell Telephone Bldg., Winnipeg; St. Norbert Block, St. Boniface; Hudson's Bay Block, Empire Block, Bank of Commerce Bldg., Edmonton; Central School, Calgary; Waterworks, Moose Jaw; Court House, Morden; Bank of Commerce Bldg., Odd-fellows Block and C. N. R. Station, Portage la Prairie, Man., as well as smaller amounts to many other buildings in Winnipeg and outside towns.

* * *

The J. H. Ashdown Retail Hardware Co., at Winnipeg, have decided that they will not rebuild this year owing to the lateness of the season.

* * *

Practically all outside work has been completed on the Miller-Morse warehouse at Winnipeg, which now presents a splendid appearance and a more beautiful and massive warehouse in this line of business cannot be found in Canada.

* * *

The market holds very strong and firm with little or no change in the price list of any account. We quote:

Barbed wire, 100 lb.	\$3 15
Plain galvanized	6 to 8 3 39
"	9 2 50
Plain galvanized	10 3 50
"	11 3 10
"	12 3 20
"	13 3 90
"	14 4 45
"	15 4 60
Plain twist	3 15
Staples	3 65
Oiled annealed wire	10 3 42
"	11 3 48
"	12 3 56
"	13 3 66
"	14 3 76
"	15 3 91
Annealed wires (uncoiled) 10c. less.	
Horseshoes, iron, No. 0 to No. 1	\$4 75
No. 2 and larger	4 45
Snow shoes, No. 0 to No. 1	4 20
No. 2 and larger	4 45
Steel, No. 0 to No. 1	4 60
No. 2 and larger	4 45
Horsenails, No. 4—1 1/4 in., list price	0 48
" 5—2 "	0 32
" 6—2 1/2 "	0 28
" 7—2 3/4 "	0 24
" 8—2 3/8 "	0 22
" 9—2 1/2 "	0 20
" 10—2 3/4 "	0 20
" 11—2 3/4 "	0 20
" 12—2 3/4 "	0 20
" 14—3 1/4 "	0 20

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

Cut Nails—	Wire Nails—
2d 1 in. \$4 10	1 in. 4 15
3d Fin. 1 1/4 in. 1 10	1 1/4 in. 4 10
3d 1 1/4 in. 3 75	1 1/2 " 3 70
4d 1 1/4 in. 3 50	1 3/4 " 3 50
5d 1 1/4 in. 3 50	1 1/2 " 3 50
6d 2 in. 3 40	2 " 3 40
8d 2 1/2 in. 3 25	2 1/2 " 3 25
10d 3 in. 3 20	3 " 3 20
20d 4 in. 3 15	3 1/2 " 3 15
30d 4 1/2 in. 3 10	4 " 3 10
40d 5 in. 3 10	4 1/2 " 3 10
50d 5 1/2 in. 3 10	5 " 3 10
60d 6 in. 3 10	5 1/2 " 3 10
	6 " 3 10

Bar iron (basis)	2 50
Swedish iron (basis)	4 75
Sleigh shoe steel	2 85
Spring steel	3 25
Machinery steel	3 50
Tool steel, Black Diamond, 100 lb.	8 50
Jessop	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge	3 75
24 gauge	3 90
26 gauge	4 00
gauge	4 10
Galvanized Iron, Apollo, 16 gauge	4 00
18 and 20 gauge	4 00
22 and 24 gauge	4 25
26 gauge English or 28 American	4 25
28 gauge	4 50
30 gauge or 10 3/4 oz	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge	4 25
26 gauge	4 50
28 "	4 75
Extra sheets, 36 in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.	11
Imitation "	07 to 08
Tinned, 24 gauge, 100 lb	8 00
26 gauge	8 05
Tinplate, IC charcoal, 20 x 28, box	9 50
" IX	11 50
" IXX	13 50

Ingot tin	25
Canada plate, 18 x 21, 18 x 24 and 20 x 28	3 00
Canada plate, full polished	3 75
Sheet zinc, cask lots, 100 lb	7 00
Broken lots	7 50
Pig lead, 100 lb.	5 00
Black iron pipe, 1/4 inch	
" 3/4 "	
" 1 "	2 80
" 1 1/4 "	3 25

Black iron pipe, ¾ inch.....	4 25
" 1 ".....	5 80
" 1½ ".....	8 20
" 1½ ".....	10 00
" 2 ".....	14 00
Rope, sisal, 7-16 and larger, basis.....	10 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrum.....	11 25
Solder.....	20
Axes, chopping.....	\$ 6 75 to 12 00
" double bits.....	12 00 to 18 00
Bluestone.....	5 25
Screws, flat head, iron, bright.....	85 and 10 p.c.
Round ".....	80 p.c.
Flat " brass.....	75 and 10 p.c.
Round ".....	70 and 10 p.c.
Coach.....	70 p.c.
Bolts, carriage, ¾ or smaller.....	60 and 5 p.c.
" 7-16 and up.....	55 p.c.
Bolts, machine, ¾ and under.....	55 and 5 p.c.
" 7-16 and over.....	55 p.c.
Bolts, tire.....	60 and 5 p.c.
Bolt ends.....	55 and 5 p.c.
Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	55 and 5 p.c.
Square nuts, case lots.....	3c. discount.
Hex " small lots.....	2½c
Hex " case lots.....	3c. "
Hex " smaller lots.....	2½c. "
Rivets, iron.....	50 and 10 p.c.
Copper, No. 8.....	32
No. 12.....	36
Coil chain, 3-16 inch.....	9½
" ¼ inch.....	7½
" 5-16 inch.....	5½
" ¾ inch.....	5½
" 7-16 inch.....	4½
" ¾ inch.....	4½
" ¾ and ¾ inch.....	4
Spades and shovels.....	40 and 5 p.c.
Harvest tools.....	60 p.c.
Axe handles, turned, s. g. hickory, doz.,	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60
Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.
Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½c.
" tarred.....	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00
Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 55
Powder, F.F., keg.....	4 70
F.F.G.....	5 00
Tinware, pressed, retinned.....	70 and 10 p.c.
plain.....	75 and 2½ p.c.
pieced.....	
Japanned ware.....	37½ p.c.
Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American.....	27½c.
Prime white American.....	25½c.
Water white Canadian.....	25½c.
Prime white Canadian.....	24½c.

SCRAP.

No. 1 cast iron.....	\$14 to 15
No. 2 ".....	7
Wrought iron scrap.....	5
Copper (heavy).....	8½c. per lb.
Yellow brass (heavy).....	7½c. "
Light brass.....	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2½c. "
Zinc scrap.....	1c. "

PAINTS, OILS AND GLASS.

White lead.....	\$5 00 to \$5 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½

Turpentine, pure, in barrels.....	\$ 0 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
Boiled.....	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.75; 26 to 40, \$4.00; 41 to 50, \$4.50; 51 to 60, \$5.00; 61 to 70, \$5.00, in 100-ft. boxes.

Lubricating oils, heavy castor machine....	0 29
" extra engine.....	0 27
" dynamo.....	0 35
" black.....	0 22
" cylinder.....	\$0 50 to 0 75
(as to quality)	

Harness oil.....	0 50 to 0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00½
" 2nd pressure.....	1 09½

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of *HARDWARE AND METAL*.

VANCOUVER, B.C., October 21, 1904.

ONCE more Canadian apathy is to have a lesson taught it by the deprivation of the trade of the Similkameen, Boundary and Kootenay districts, which is about to be diverted to Spokane. For thirty years there has been a cry for a railway from the interior direct to the coast, by means of which the distance could be covered in six or eight hours, and those who first went into the country were so sanguine that it would soon be constructed that they planted orchards, etc., which to-day bear fruit that falls to rot. Now the Great Northern has its line about completed to Fernie, and will take the trade of all that portion of British Columbia to Spokane, and American papers in the west are making much of the fact. The route up as far as Princeton has been surveyed and cross-sectioned, and construction is to begin there the first thing in the spring. Construction gangs are now camped at Oro for the winter, ready to start operations at the first opportunity. Right of way has nearly all been purchased.

The same thing will follow as with the Yukon trade. For three or four years it built up Seattle and San Francisco before it was discovered that it was worth going after. With the cancellation of the charter of the line to the Yukon, granted MacKenzie and Mann, this city's growth was greatly retarded, and because of the slowness of the Government, in regard to the direct line to the interior, the coast cities will again have progress suppressed.

Only those who have been through the interior realize the resources of mineral and arable lands, and so much faith have those people in the country that claims and ranches are held in anticipation of the day when transportation facilities will be afforded. The latest and greatest instance of the immense riches of the Similkameen is the development of the Nickel Plate

mine at Hedley City. Mr. A. B. Clabon, a well-known mining man who has just returned from a trip to the eastern boundary of the province, states that because of the fact that no news is given out regarding this mine that few imagine that it is one of the biggest in the world. Over \$1,000 per day profits are being made and that not in the richest ore, and before all the apparatus is installed. The vein is 80 feet wide, and is traced for 2,700 feet, one of the largest propositions ever studied. It was discovered in 1898 and two months after was bonded to the people who now hold it—eastern Americans, Scanlan, of Amalgamated Copper fame, being among the number, and so much ore was found in sight that before the expiration of the legal term the bond was taken up.

This is only one instance of what will bring prosperity to the province could we retain the trade. Mining is picking up all over the interior, but because of retrogressive policy this province is the only one in the Dominion not enjoying its share of prosperity. While censure is due the Provincial Legislature the Dominion Government comes in for a share in denying the duty on lumber. Fifteen million feet per month is imported from Washington, sufficient to keep the mills here going night and day. The argument is advanced that the prices will be raised, but, if so, the Government has the remedy—repeal the duty.

* * *

W. H. Aldridge, manager of the metallurgy department of the C.P.R., was in town this week, and stated that the mines at Banff are shipping 200 tons of anthracite coal daily to the Territories.

Alex. McLean, commercial agent to Japan, writes that the coal from Comox greatly pleases the consumers in that country, and that a good trade is likely to spring up.

Local prices of glass are unchanged, although figures in the primary markets are reported higher.

A Portland syndicate has acquired the Nahmint mines at Alberni. Machinery will be installed, and the properties opened up on a large scale. A. C. Cabel has just returned from making a report.

Fifteen and a half knots of cable arrived on the Blue Funnel liner Telemachus this week, for the telephone line to Victoria. It is now being laid by the steamer Rapid Transit. When completed, the toll on the line will be 50 cents per minute.

Two tugs, one 60 feet and the other 45 feet long, are being constructed by the Vancouver Shipyards, Limited, for the

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion. Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

SITUATIONS VACANT.

WANTED—A blacksmith helper; two or three years' experience; good chance for improving at second fire. Apply at once; state wages, to M. Haddle, Box 64, Caledonia. (f)

WANTED—First-class electric wire men; at once. Apply Foreman Electrician, Toronto Carpet Co., King street west. (f)

BUSINESS CHANCES.

GENERAL STORE—I offer the branch store of Homer & Co., at Rosseau, including supply boat str. Constance, for sale; stock about \$12,000; well assorted; this is one of the largest and best paying businesses in Muskoka. Apply to R. Wade, Orillia. (f)

SITUATION WANTED.

YOUNG man of business ability wants experience as salesman in retail hardware store; understands books. Ontario or Northwest. Box 192, HARDWARE AND METAL, Toronto. (44)

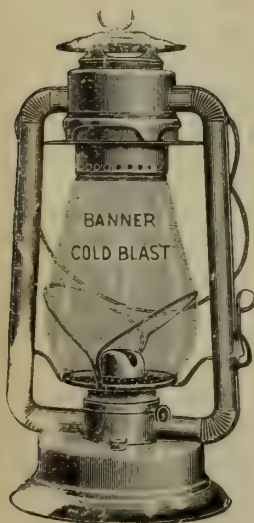
WANTED.

WANTED—Customers wanted by J. Albert Schmidt, Solingen, Germany, for his knives, and scissors, also for household specialties which also sell to hotels, restaurants, hospitals, etc. Self acting cooks, potato-peeling and washing machines, clothes wringers, folding ladders, cask tsands, dish-cleaning machines, etc. (44)

FOR SALE.

FOR SALE—Good paying tinshop; good dairy trade; large cavertrough business; everything complete for the work; stock, tools, horse, rigs, cheap. R. B. Scriven, Otterville, Ont. (48)

THE BANNER ALWAYS LEADS.



Brilliant
Light.
Wind
Proof.

For sale by all
prominent
jobbers
throughout
the
Dominion.

Manufactured
by the

Ontario Lantern & Lamp Co.
Hamilton, Ont., Limited

Fraser River Oilery. The boats will cost nearly \$10,000.

The provincial assayer is visiting the Nanaimo district to examine the stone quarries, and report upon the suitability of the material for building purposes.

The leaded glass works, so long conducted in this city by the firm of Henry Bloomfield & Sons, have been purchased by the British Columbia Plate Glass and Importing Company, composed of A. P. Bogardus and C. A. Wickens. Many orders are received, especially from the Territories.

The oil tank steamer Whittier, of San Francisco, is in port discharging 325,000 gallons of crude petroleum for the Sugar Refinery. This fuel has been substituted for coal and found immensely satisfactory. Other firms may also adopt it.

About 500 tons of miscellaneous freight were left over at White Horse at the close of navigation on the Yukon this year. This does not include 700 tons of steel rails for the railway to be built into the Tanana, which will be taken down the river in the Spring.

Rapid progress is being made in the erection of the zinc separator by the Kootenay Ore Company at Kaslo.

The Reisterer brewery at Nelson has been sold to local buyers, the consideration being \$35,000.

O. A. Robertson, of St. Paul, president of the Red Deer Lumber Co., F.B. Lynch, St. Paul, secretary of the company, O. L. Boynter, St. Paul, and G. F. Ditbinner, Minneapolis, who control large timber limits near Fernie are in the west, and are considering the erection of a large mill. They represent a very large amount of capital, and the Red Deer Co.'s mill is one of the finest on the continent.

TRADE NOTES.

The hardware store of B. N. Woodhall, Oxbow, Assa., was burglarized recently, the loss being in the neighborhood of \$25 in cash.

J. A. McTaggart, recently with Miller, Morse & Co., Winnipeg, is starting a hardware and lumber business at St. Peter's and Humboldt, Man.

The hardware store of C. M. Cutts & Co., Toronto Junction, was burglarized recently. The loss consisted chiefly of cutlery and amounts to about \$400.

The hardware premises and stock of I. P. Friesen, Hague, N.W.T., has been destroyed by fire; the loss is \$7,000.

It seems quite probable that a pulp paper industry will be started at Quatsino Sound, B.C., by the Quatsino Power and Pulp Co.

BUSINESS CHANGES.

ONTARIO.

THOMAS BEATTIE, hardware and implement dealer, Comber, has sold implement business to A. F. Allen.

W. A. Malone, wagon maker and rack manufacturer, Dutton, has closed up.

John Bowman Hardware and Coal Co., London, has assigned in trust to James Hardy, Toronto.

The assets of the London Builders' Supply and Mfg. Co., London, are to be sold by auction.

The Metal Shingle and Siding Co., Limited, Preston, suffered loss by fire; insured.

Neil Brunzell, boat builder, Rat Portage, has been burned out.

S. J. Kohler, tinware and stove dealer, Smithville, has sold out to Zimmerman & Leggar.

James W. Fenwick, of the Parkdale Furnace Co., Toronto, is dead.

QUEBEC.

Dominion Foundry Co., Sorel, have dissolved partnership.

M. Billette, tinsmith, Cartier, has removed to Montreal.

Joseph A. Gagnon, Chambly Basin, has registered under the style of the Hardware Specialties Mfg. Co.

The Tiger Metal Co., Montreal, have dissolved partnership.

Jack Watson, Montreal, has registered as president of the Tiger Metal Co., Limited.

F. X. Bilodeau is curator to Joseph Desforges & Co., wholesale and retail hardware dealers, Montreal.

Lulu Clendinning has registered under the style of Wm. Clendinning & Son, stove manufacturers, Montreal.

Harry F. Cook, has registered as general manager of the D. B. Martin Co., Limited, dealers in hardware, oils, etc., Montreal.

C. E. Brodeur, plumber and tinsmith, St. Hyacinthe, has assigned.

MANITOBA.

The Winnipeg Paint and Glass Co., Winnipeg, have increased capital stock from \$75,000 to \$250,000.

The Canada Territories Corporation, Limited, Rosthern, have sold hardware and implements to J. M. Hackeney.

Joseph Rinn, hardware dealer, Elm Creek, has sold out.

I. P. Friesen, hardware dealer, Hague, has been burned out.

John D. Nisbet of Nisbet-Chandler Co., Winnipeg, is dead.

UNITED STATES METAL MARKET.

From the New York Journal of Commerce, O. t. 27, 1904.

Pig Iron—The pig iron situation continues strong with the volume of business still running above the normal in the Eastern markets. Sales of 10,000 to 12,000 tons were made in New York yesterday with contracts for 35,000 tons of foundry grades and 15,000 tons of basic still pending.

Northern furnaces are selling moderately and are obtaining 25c per ton advance in some instances. Among the sales yesterday were 3,000 tons No. 2 X foundry at \$14 at the furnace; 1,000 tons do. at \$15 delivered and smaller lots at \$15.25 delivered; 300 tons do. at \$14.25 at the furnace; 5,000 tons Eastern basic iron sold at \$13.50 delivered.

Ten or twelve sales of Southern iron are reported in the Birmingham district at \$12, and one offer of \$11.50 for 1,500 tons for Eastern shipment was refused. There are several Southern companies willing to make further sales of considerable amounts at \$12, but other producers in Alabama are reported to have turned down orders at \$12.

Information from some large consumers of pig is received to the effect that for much of the foundry iron recently purchased orders are on the books, showing that in the foundry trade at least buyers are not anticipating requirements to the extent supposed. In the steel trade, however, there has been more disposition to anticipate requirements.

Bessemer iron in the Mahoning and Shenango Valleys is generally held at \$13, but the volume of business is very moderate.

Machinery manufacturers, electrical plants, engine builders, pipe works, general and special foundries are all in the market for various deliveries during 1905 and the larger tonnages are wanted for far-off months. Furnaces, however, are not willing to entertain offers far into the future except at a premium, and these buyers are not willing to pay.

Pittsburg reports that the Steel Corporation is giving support to the coke industry by buying the surplus output of the Oliver & Snyder Steel Co. for the remainder of the year. It should be remembered though that this latter company often makes trades with the Steel Corporation, receiving billets in exchange for coke.

Bar Iron—There is still some pressure to sell bar iron with offerings by both first and second hands at 1.40c delivered at New York equivalent to 1.25 1-2c

Pittsburg, although the association price is still 1.30c base Pittsburg. The store trade is quiet at 1.70c to 1.75c base full extras.

Coke—Sales of furnace coke are reported at \$1.65 for 1904 delivery, \$1.70 for first quarter of 1905 and \$1.75 for the second quarter. Foundry coke is also in fair demand and firm. Virginia foundry coke sells at \$1.80 to \$2 and 72-hour standard Connellsville at \$2 to \$2.15, and some special brands at \$2.25 to \$2.35, at the ovens. Furnace coke ranges from \$1.50 to \$1.75 at the ovens.

Old Material is more active and stronger, with sales of 250 tons heavy steel at \$13.50 delivered and a few hundred-ton lots of cast borings at \$7.50 delivered. The following are the approximate quotations for car lots f.o.b. New York, Brooklyn and Jersey City: No. 1 wrought, \$11 to \$11.50; No. 2 wrought, \$6.50 to \$7.50; machinery cast, \$10.50 to \$11; heavy steel melting scrap, \$11.50 to \$12; wrought pipes and tubes, \$8.50 to \$9; stoveplates, \$8.50 to \$9; old iron rails, \$15 to \$16.

U. S. STEEL CORPORATION.

THE regular meeting of the directors of the U. S. Steel Corporation was held yesterday and the usual quarterly dividend of $1\frac{3}{4}$ per cent. was declared on the preferred stock.

The statement published showed that the net earnings of the corporation for the three months ending September 30 were \$18,773,932 and a surplus of \$1,312,988 after deducting charges for depreciation, interest, dividends, etc.

The total tonnage of unfilled orders on the books of the corporation on October 1 was 3,027,436 tons, which is less than was generally anticipated. Regarding this, however, Chairman E. H. Gary said as follows:

"Our orders for steel products are coming in now at the rate of about 26,000 tons a day, which is an increase of practically 30 $\frac{3}{4}$ per cent. as compared with the bookings in October a year ago."

DAN PATCH, 1.56.

Dan Patch paced a mile in 1:56 at Memphis on Wednesday, Oct. 27. This is the fastest time ever made by a harness horse.

The showing of Dan Patch astounded everybody. Two months ago he was at the point of death. On Wednesday he travelled faster than any harness horse ever went.

This is of special interest to readers of Hardware and Metal, as they have become well acquainted with Dan Patch through the advertisements of the In-

ternational Stock Food Co., which have appeared each week in the paper. If International Stock Food can bring a horse from the point of death to the perfect state he is in to-day, it should be worth a trial.

INQUIRIES FOR CANADIAN TRADE.

The following inquiries concerning Canadian trade have been received by the Curator, Canadian Section, Imperial Institute, London, Eng.:

92. A Sheffield manufacturer wishes to develop trade in Canada in cutlery, saws, files and electric plated goods.

94. A firm manufacturing varnishes of various kinds is prepared to appoint suitable Canadian resident agent.

* * *

The following inquiries concerning trade in Canada have been received by the Department of Trade and Commerce; at Ottawa:

36. Wanted by a broker in Paris, names of exporters of cod liver oil (Norway process) and all kinds of fish oils.

37. French paint manufacturer wants good agents in this country.

The names and addresses of the firms making these inquiries may be had by application to the Department of Trade and Commerce, Ottawa. Parties making these inquiries will be careful to mention the office under which said inquiry appears and the number.

WINNIPEG HOCKEY LEAGUE.

The Wholesale Hardware Hockey League was organized last week at a meeting of the representatives of the local hardware firms at the Leland house. Six firms were represented, and the meeting was a very enthusiastic one.

The firms represented were J. H. Ashdown & Co., Miller, Morse & Co., George D. Wood & Co., Merrick, Anderson & Co., Marshall, Wells & Co., and James Robinson & Co. All these firms announce their intention of playing, though Miller-Morse representatives were uncertain. The election of officers resulted as follows: Patrons, J. H. Ashdown, George D. Wood, W. G. McFarlane, T. A. Anderson, W. C. Reaman; president, W. B. Towers; vice-president, T. J. Molloy; secretary-treasurer, E. C. Pratt. The executive committee will consist of one representative from each house.

THEIR NEW FACTORY READY.

The Frost Fence Co.'s new factory at Hamilton, Ont., is practically completed, and the machinery and employees are being transferred from Welland there. One thousand tons of wire has been received at the factory (Hamilton) for the Fall work.

PAINT, OIL AND BRUSH TRADES

Flaxseed at Chicago.

THE net result of the week's trading in flaxseed was a loss of $\frac{1}{2}$ c on October and December seed and about 1c on the cash No. 1 Northwestern. The markets are evidently dull, for receipts of seed have been comparatively small during the past week, being under 200 cars daily except yesterday (Tuesday), when 213 cars were received at the three points. As compared with last year the daily receipts are only a little over one-half what they were then. Seed at that time was selling very low—at 91 $\frac{1}{2}$ c for the No. 1 Northwestern, as compared with \$1.15 now, and other grades were correspondingly low in price, but this was the low point of the year and was due to an accumulation of seed on the old and new crops such as was never before seen. With the bulk of the old seed now in strong hands and receipts light the only apparent cause for present dullness is the apathy in the oil market. Quotations: Tuesday, Oct. 25, the market was steady to $\frac{1}{2}$ c lower. October closed at \$1.09 bid and December at \$1.12 bid. No. 1 Northwestern closed at \$1.15 bid and Southwestern at \$1.09 bid.—Paint, Oil and Drug Review, October 26.

For Stiffening Shellac.

A CORRESPONDENT of the American Druggist asks: "What can be added to shellac to increase its stiffening properties? Do you know of some ingredient or fluid that can be added to shellac to increase its stiffening properties when applied to felt or cloth and at the same time not render it brittle? It must not destroy the waterproofing qualities of shellac and should overcome the tendency of shellac to soften under a moderate degree of heat. The purpose for which I want it is to make a shaped article, which will keep its shape, or, if bent, must snap back to its original shape. It must be some ingredient much cheaper than shellac, that can be added to the latter so as to impart to the cloth or felt more stiffness than a stiff hat, but not so pliable; it should not be a glue or gelatin or anything of pronounced odor." To which the editor replies: "What our correspondent seeks is evidently some form of preparation resembling the celluloid varnish which was so widely advertised several years ago under the name Pegamoid. This consisted of a solution of camphor, shel-

lac, cellulose, dinitro cellulose and mastic, in a mixture of ether and acetone, alcohol being used as a solvent for the rather heavy fluid which resulted from this combination."

Foreign Seed and Oil Markets.

EARLY in September Calcutta-London flaxseed was quoted at 36s 3d on passage. La Plata passage 35s 3d. September-October seed was higher. Since then there has been a steady decline to present figures of 32s 9d for Calcutta and 32s for La Plata. The decline was caused in the first instance by the persistent selling of Bombay, coupled with the dull market in Hull and London. This was followed by heavier shipments from India and Argentina and a decline in the oil market, which further affected seed. Still later it was found that heavy quantities of Calcutta seed near at hand and unsold were pressing on the market, and another low point was recorded. Calcutta seed is now at the same quotation as in

early July. From that time until about October 1 the Calcutta-London market was advancing until an advance of over 5s had been recorded, when the present decline set in.

The influence of a dull oil market is seen in this downward movement of seed. When the demand for oil is at low ebb the main stimulant to the seed market is lacking. In mid July linseed oil in barrels at London was quoted at £17 10s. The latest quotation now is £15 15s, a decline of nearly £2 in three months. It is believed that the low point has been touched, for we note that at the reduced prices there is an improvement in the demand.

While seed and oil have been declining linseed cake has been advancing. The July quotation for American Western was £5 15s. The October quotation is £6 10s. This seems to be due entirely to the local drought conditions in Europe, where the demand for cake is heavy on account of shortage of other feed stuffs.

The Paint of Quality



The first and most important object in making Hollywood paint is to get the Quality right, then regulate the price accordingly.

This is why Hollywood costs a little more than some others; but it is cheap paint because of its Quality.

In Paste, Ready-Mixed and Floor.

THEY WEAR ON THE JOB, NOT OFF IT

The Imperial Varnish & Color Co.

TORONTO, CANADA.

LIMITED.

TO THE VARNISH BUYER

the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

BERRY BROTHERS, Limited

VARNISH MANUFACTURERS

WALKERVILLE, ONT.

Write for our 100 page illustrated catalogue. Every dealer should have a copy for reference.

THE TEST OF A BRUSH

is in the using, and if the goods you supply do not stand the test, you are sure to lose the good will of your customers.

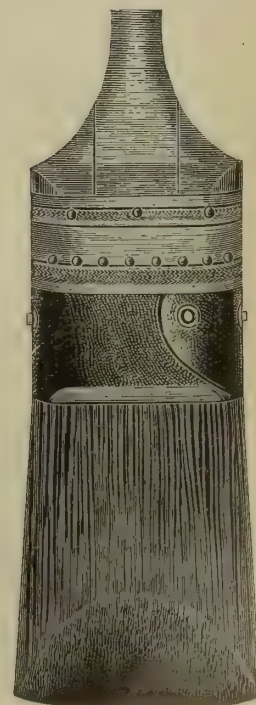
BOECKH'S BRUSHES

have been long tried and never found wanting, either as regards style, finish or durability. They are unrivalled and are always the choice of the "particular."

"THE STANDARD GOODS OF CANADA."

United Factories, Limited,

Head Office: TORONTO.



BRANCHES:
MONTREAL
LONDON

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Oct., 28, 1904.

THE brighter feeling which was mentioned in last week's issue in the paint and oil market, still prevails, and the factories report that they are fairly busy. There is an entire absence, however, of what might be called rush. No changes have been noted in linseed oil and turpentine, and the demand for these staples continues steady. There is a feeling in the country that stocks of white lead should not be allowed to run too low, in case that a change in the tariff arising from new conditions should materially affect the price of this article. Vermillions and coach colors are in fair request. Putty is moving very freely, in fact it is hard for the manufacturers to keep up with urgent requests for shipment. The market throughout continues steady and no change of prices is noted this week.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2 \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 61-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 51-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1. 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 71-4c; smaller quantities, 81-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 51-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Turpentine—Single barrels, 81 1-2c per gallon; two to four barrels, 80 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs. The above prices are net 30 days; for longer terms prices are higher. The market is firm.

Linseed Oil—Raw, 1 to 4 barrels 44 to

45c; 5 to 9 barrels, 43 to 44c; boiled, 1 to 4 barrels, 47 to 48c; 5 to 9 barrels, 46 to 47c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon in advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

St. John, N.B.

Burning oil is at this season a very active line. Shipments are large. Prices have shown no change for some time. Lubricating oils are unchanged in price and business is somewhat dull. Paint oils continue to have a fair sale at quite full figures. In candles prices are rather easier. The receipts of cod oil are not large but price shows no change.

Window Glass.

MONTREAL.

In Belgium the factories have not yet resumed operations and a serious shortage is anticipated during the coming Winter, as no orders whatever are being taken by the manufacturers. Glass dealers in this city are now waiting to see if orders placed early in the season are to be filled. If advices are received to the contrary there will be a sharp advance very shortly, and even at the higher prices glass will be hard to get. We quote: First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do.,

\$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent discount thirty days.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Oct. 28, 1904.

CONSIDERABLE activity is noted, many orders being rushed out before Winter freight rates come into force. There is a particularly good movement in white lead. Prices are unchanged. We quote:

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lbs. and upwards: 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs., \$4.25; ditto, in kegs of 100 lbs., \$4.50; No. 1, in casks of 560 lbs., \$3.75 to \$4; ditto, in kegs of 100 lbs., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 to \$2.62 1-2 per gallon; No. 1, \$2.50.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 46c; boiled, 49c; 5 to 9 bbls, raw, 45c; boiled, 48c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls, 79c; 2 to 4 bbls, 78c, Toronto; 5 bbls and over, f.o.b. point of shipment, net 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 81-2c per lb.; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders in 100 lb. kegs, \$1.85; bulk in barrels,

If You Buy

Varnishes Paints
Japans Colors
Lacquers Glues
Stains Bronzes
Fillers Chamois
 Sponges

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R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.

LINSEED OIL

Linseed Oil is no exception to the rule that the best is none too good for everyone.

Livingston's pure RAW AND BOILED LINSEED OIL is the standard of to-day, and we are supplying the very best trade on the market. Why should you not be among the high-class trade handling the standard oil? You must be awake to obtain good results and to satisfy your high-class trade, who, you may think, are always too ready to find fault with your goods.

This oil is so thoroughly known that it is sought for in all parts of the Dominion, and to hold your best trade it is simply indispensable. If you do not handle our oil write to headquarters. Your trade will increase and all parties will be satisfied.

The Dominion Linseed Oil Co.

Limited

HEAD OFFICE : 34 YONGE ST., TORONTO.

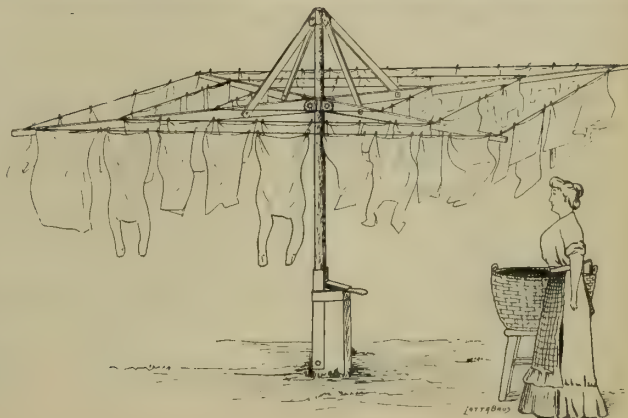
FACTORIES: BADEN, LORA, GUELPH, OWEN SOUND, ONT.
and 31 Mill Street, MONTREAL.

Plant your

Clothes Reels

Before the ground freezes up.

There is no better kind than the "Davis," cut of which appears herewith. Send for circular and price list. You want a reel for your own yard and they sell well.



Waggoner Extension Ladders

Your eavetroughers, painters, fruit pickers, farmers, etc., want a safe and handy ladder, and perhaps you want one for your house for putting up storm sash, cleaning eavetrough, washing windows, etc.

Your painter customers want trestles also. We make the lightest and handiest in existence.

Send for our catalogue, circulars and price list.

The Waggoner Ladder Company, Limited, London, Ont.

Western dealers write to E. H. Briggs & Co., Winnipeg, our western agents.

Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Philip D. Johnston; 65 full-page plates and 2 folding plates, with full text and 184 illustrations; cloth.....\$2.00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire buildings for bells, alarms, annunciators, and gas lighting from batteries. 55 pages, illustrated; paper, 25c.; cloth..... 50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages 25c.

Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for mixing and using cements. 96 pages....\$1.00

Metallurgy of Cast Iron.

By Thos. D. West. Showing processes involved in its treatment, chemically and physically, from the blast furnace, through the foundry, to the testing machine. 627 pages, 153 illustrations...\$3.00

Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and zinc; also tinning gray iron castings....\$2.00

Practical Plating and Polishing.

Best and Most Approved Methods of Preparing and Cleaning all Metals for Electro-Plating and Polishing. 114 pages, illustrated 80c.

New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as applied to all branches of sheet metal work, 430 pages, 744 illustrations.....\$5.00

Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams, tables, 123 pages, 53 figures\$1.00

Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates\$1.50

Furnace Heating.

By Wm. G. Snow. Comprehensive treatise on warming buildings with hot air, with appendix on furnace fittings, 170 pages, 90 illustrations, cloth.....\$1.50

Plumbing Problems.

House drainage and plumbing, 309 pages, 146 illustrations.....\$2.00

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For beginners in plumbing, 66 pages..... 25c.

Kitchen Boiler Connections.

A selection of practical letters and articles relating to water backs and range boilers. Fifth edition, enlarged\$1.00

Steam and Hot Water Fitters' Text Book.

A book prepared for the Steam and Hot Water Heating Course at the New York Trade School, with supplementary chapters on house heating, specifications and surface estimating, by Thos. E. McNeill. 140 pages; 5 x 7 in.; numerous illustrations; cloth binding\$1.00

Easy Lessons in Roof Measurements.

Twelve short lessons on figuring from architects' or scale drawings the amount of material required to cover a given surface in flat, hipped or irregular shaped roofs, by W. Neubecker. 81 pages; 5½ x 8 in.; 121 illustrations; paper cover 25c.

Enquiries for above books should be sent to

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HARDWARE AND METAL,
Toronto

THE
RECOGNITION
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THE
SUPERIORITY
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THE
CANADA
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COMPANY'S
PAINTS
LEADS
THE
PROSPECTIVE
PURCHASER
TO
CHEERFULLY
PAY
THE
SLIGHTLY
HIGHER
PRICE
ASKED
FOR
THEIR
FAMOUS
BRANDS.

\$1.45; bulk less than barrels and up to 100 lbs., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 71-2c per lb. and 81-2 for single tins.

Turpentine at New York.

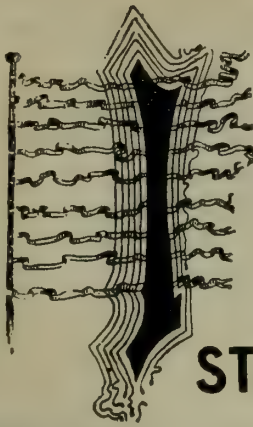
The lower prices reported from the Savannah market appear to have comparatively little effect locally. The volume of business transacted was small, the demand being strictly of a hand-to-mouth character, but as receivers were carrying only light supplies, as shown by the stocks in store, there was no disposition shown to force sales, sellers holding for 55½c for machines, but whether or not this price could be shaded ¼c for a round lot could not be positively stated, as the bid was not forthcoming. Supplies for next week's delivery could be purchased at ruling asked prices.

NARROWLY ESCAPED ASSASSINATION.

Mr. D. Drysdale, a highly esteemed hardware merchant of Montreal, had a narrow escape from death at the hands of a former clerk on Thursday of this week. The would-be assassin failing in his purpose, committed suicide before the clerks and a customer in the store. Mr. Drysdale told a representative of Hardware and Metal that the young man, who had recently been discharged, came to see him and asked for a private audience, which was granted. When the two were alone the ex-clerk drew a revolver and demanded money. After reasoning with him for a few minutes Mr. Drysdale said it would be necessary to go down stairs to the safe, which he was allowed to do, and when making his escape towards the door he was fired on, the bullet whizzing past his head. The young man then turned the revolver on himself and fell dead on the stair.

Hardware and Metal expresses regret at the unfortunate affair, but congratulates Mr. Drysdale that it did not terminate more seriously for himself.

The Elk Lumber and Manufacturing Co. propose to erect a large sawmill at Fernie, B.C. The capacity of the mill will be 100,000 feet per day of ten hours.



N building up your business, don't gamble. Gambling is profitable to the banker. In the matter of Paints, Oils, Varnishes and allied lines, don't gamble. Tie up to the best goods possible to get. That means tie up to us.

Our **BATH TUB ENAMEL**

is hard, non-absorbent, and effectually resists hot and cold water. Has a lot of other good features. Send for our catalogue.

STANDARD PAINT & VARNISH CO., LIMITED
WINDSOR, ONT.

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

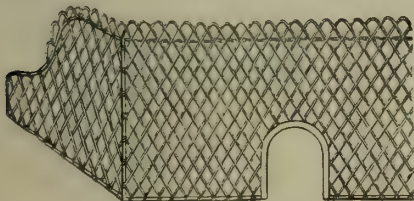
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WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



We make all styles of

WIRE AND METAL RAILINGS,
WINDOW GUARDS, ETC.

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DENNIS WIRE & IRON CO.,
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Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

GLUES

of every kind, and for every purpose. Our glues enjoy large sales in almost all countries of the world, and our brands are generally to be seen amongst good stocks of glues. We believe we are giving better value than any other manufacturer, and we want to submit our lines to the Canadian test. Samples gladly sent in reply to enquiries.

GROVE CHEMICAL CO. Ltd., Appley Bridge,
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Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works
or from the principal Color Dealers in Canada



Aluminum Paint

is a ready seller at this time of year. People want it for stove pipes and radiators, and if they have used "Island City" brand they want it again. How is your stock?

P. D. DODS & CO., Montreal  Toronto  Vancouver



A PROFITABLE paint trade doesn't end with mixed paints, but it often commences there. Paint trade expands easily. It leads out to Paint Brushes, Enamels, Gloss Paints, Stains, Varnishes, Glass and many other lines, all bringing in handsome profits. But the

foundation must be right. A risk on this is a risky risk. What line have you got? Could it be better? Let us tell you about

RAMSAY'S PAINT

and what we can do for you; what the price is and how it is advertised. It will assist you to a paint trade.

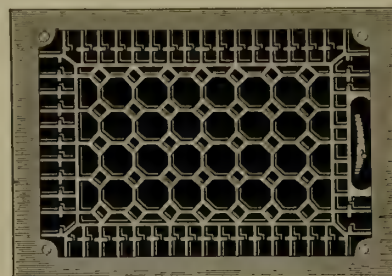
A. RAMSAY & SON COMPANY,

Established 1842.

MONTREAL.

Paint Makers.

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,
BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

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Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



The Standard Ideal Sanitary Co. Limited

MANUFACTURERS OF

Porcelain Enamel Bath Tubs Lavatories Sinks Slop Hoppers

"MADE IN CANADA."

Porcelain Enamel Bath Tubs,

Porcelain Enamel Sinks,

Porcelain Enamel Lavatories,

Porcelain Enamel Lipped and Plain Urinals,

Porcelain Enamel Slop Hoppers,

Porcelain Enamel Factory Wash Sinks.

THE ONLY MANUFACTURERS OF ENAMELLED WARE IN CANADA

Head Office and Factory:

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THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Oct. 29, 1904.

SOME unusually large orders have been received by manufacturers during the past week, for shipment to eastern points. This is due to the fact that later boats charge a higher rate, so that goods are being ordered to be sent with all possible despatch. In

heating goods manufacturers are scarcely able to handle the large volume of trade that has been done. This is the harvest season in these lines and every advantage is being taken of that fact. All lines are in good demand and moving well. Some sizes of iron pipe are still scarce. Prices remain unchanged.

Range Boilers—Although the active season for these extends well on into the Winter, there is a very brisk demand at present and manufacturers are taxed to their utmost to keep up the supply. Our quotations are as follows: Iron clad 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—The market is firm and an early advance is expected. The demand is good for all sizes and a very large quantity is being used. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—The demand has lessened somewhat recently and it is not expected that there will be a revival this season. The new discount quoted last week still holds. We quote: Soil pipe, standard, 50 per cent and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—The demand continues good with no change in prices. We quote discount on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—There is a scarcity in some sizes, caused by the very great demand that at present exists. This shortage will probably continue until after the active season has passed. The market continues firm, but no change in price is noted. We quote as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1 1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in.,

\$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, Oct. 28, 1904.

ALL dealers handling these lines of goods are very well satisfied with the amount of business done this year. Dealers report a scarcity of good men and therefore they are greatly handicapped in filling the large amount of orders that are daily rushing in from all parts of the Dominion, but especially from the Provinces of Manitoba, Quebec and Ontario. Local trade is brisk from the fact that the manufacturers are rushing the work ahead in order that they may be installed in their new premises before Winter sets in.

The outside trade has been unusually busy during the past six months and the only reason we can attribute it to is the fact that a number of provincial towns have installed waterworks systems and as a result householders have had to do a certain amount of plumbing. A continuation of present circumstances is anticipated by all dealers for some time yet. Prices continue unchanged with the exception of 3-8 inch pipe, which has decreased 5c. Our quotations are:

Lead Pipe—A good trade continues at steady prices. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60

per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—An increase of 5 per cent. is noted in the discount on headers and nipples. Prices are steady. We quote nominally: Malleable fittings 20 per cent. for American and 35 per cent. for Canadian; cast iron (standard), 65 per cent.; headers, 60 per cent.; flanged unions, 60 per cent.; malleable bushings, 57 1-2 per cent.; cast iron bushings, 70 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A steady demand continues with the discount unchanged at 15 per cent.

Iron Pipe—Reports state better conditions. Cutting in prices still continues. Our quotations are as follows: Black, 1-3 inch, \$1.97; 3-8 inch, \$2.10; 1-2 in., \$2.28; 3-4 in., \$2.86; 1 in., \$4.10; 1 1-4 in., \$5.62; 1 1-2 in., \$6.72; 2 in.,

\$8.98. Galvanized, 1-4 in., \$2.80; 3-8 in., \$2.86; 1-2 in., \$3.14; 3-4 in., \$4.01; 1 in., \$5.75; 1 1-4 in., \$7.85; 1 1-2 in., \$9.43; 2 in., \$12.57.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 5 1-2 feet, 2 1-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 2 1-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D, A quality, \$5.40; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

The branch hole should be worked out to about the same shape as the large end of a straight joint, care being taken to drift the lead up at each side of the hole, so as to leave full bore through the line. Should the branch enter too far, curve it out with a knife, and be sure that the curve is turned right way before wiping the joint. When making openings for soil or waste pipe joints cut the holes in the shape of an ellipse, leaving just enough stock at each end to turn up and catch the bevel on the branch piece. Of course, when the pipe is too large for the stock to stretch and form a flat-end socket the feather edge must be cut away to thick lead and the branch end curved out to fit. I may add that in soil-pipe branch joints two or more lips may be cut in the end of the branch piece and lapped outside the main cleaning to prevent slipping; the lips must be cleaned on both sides.

HINTS ON JOINT WIPING.*

(Continued from last issue)

A plumber is often tempted to rasp the small end just enough to insure the bearing keeping out solder. Beware of such temptations, for a pipe that might otherwise meet expectations would probably at times prove inadequate on account of the break, or if the pipes be of unequal diameter, on account of the abrupt change of size causing "eddy-ing" of the contents.

It is not to be inferred that such would result from a single instance of this kind of work; but the sum of a number of slight failings of a like character has been known to cause noticeable results. The proper way is to expand the small end until the expanded part of the bore is equal to the bore of the larger pipe (when joining pipes of unequal diameter), then rasp it down to the proper angle, which insures a gradual increase or decrease of bore, as the case may be.

PREPARING THE LARGE END.

Preparing the large or receiving end of a joint properly depends upon the class of work. For example, take the large end of a round joint upon ordinary service pipe. It can be prepared in two ways. Were it to be wiped in a horizontal position, the writer would bore out the end, because it saves time. Some plumbers object to this method; they say there is nothing for the solder

to "pull" upon, and support their logic by winding a string around pieces of pipe joined in that manner to prove that it does not hold as firm as though the pipe was expanded with the turn pin.

Let the young plumber remember that the lasting qualities of a joint depend upon a perfect union of metals, not upon friction. On the other hand, were the joint to be made in an upright position I would expand the large end with the turn pin; then a slight rasping to reduce the belly of the joint would leave a shoulder to support solder, and enough to form the joint can be kept up much more easily than if the cleaning was straight. When selecting a turn pin always prefer one whose sides make the least angle, for, as with the wedge, the smaller the angle the more easily it is driven, and the chance of drifting or stoving one side of the end is much less.

Although the turn pin is a "turned" pin, it probably received its name from the fact that it is always best to turn it a little after each tap of the hammer, which causes the expansion to be more uniform and the pin to wear better. Those who prefer to expand the large end of a joint will save time by rasping down first. A little practice will teach the eye just how much stock should be left to stand the expansion without splitting.

USING THE TAP BORER.

The proper use of the tap borer is to make holes for branch pipes, in one of which the bending iron is being used.

SOILING THE ENDS.

The fourth step in preparing a wiped joint is to soil the ends, to prevent the solder from sticking to the pipe in any other than the place purposely cleaned for it. Many other things will answer instead of soil, but none of them quite so well as common black soil for beginners. Soil is made in the following manner: Take half an ounce of pulverized or stick glue and dissolve it in water; then gradually add a pint of dry lampblack, with water enough to bring the whole to the consistency of thick cream. Boil and stir until the glue is thoroughly incorporated with the black. Paint a little of the soil upon a piece of pipe and rub it smartly with a dry finger; if it rubs off easily add a little glue, but if it sticks and takes a slight polish it is good. There is no delicate or exact proportion necessary to make soil. Be sure there is enough glue and use it hot. A short-haired brush is best, as it does not spatter. The principal cause of soil coming off is dirty pipe. Even new pipe should, before using, be well rubbed with chalk, which cuts off all the grease and dirt that may be on the surface. About 4 inches of each end, except the rasping, should be soiled for a wiped joint. Another good reason for soil coming off is, not that the soil itself is bad, but because the solder is pressed and passed over it more than is necessary. A good plumber can wipe a neat joint without soil if forced to do it. Perfect union of the solder and pipe cannot take place unless the solder is applied to a clean unoxidized surface.

*The above is from "Practical Hints on Joint Wiping," published by the David Williams Co., New York, and sold in Canada by the book department, HARDWARE AND METAL, Toronto, at 25c. The book is illustrated in a most practical and thorough manner.

To insure this the ends of the pipe must be scraped with the shave-hook. Merely scraping is not sufficient; a good shaving must be taken off, exposing a bright lead surface, which must be covered with tallow to prevent the oxygen in the air from tarnishing the cleaning; the tallow also seems to aid the solder in flowing freely. The writer does not believe in closing the cup where couplings and cocks enter the large end of a joint. In some cases a better joint results from rasping the spigot end of a lead pipe a little sharp, which leaves an angular space to be filled with solder. There need be no fear that solder will get into the pipe if the ends are true and the tip of the rasping soiled.

For convenience in shop work some blocks about the size of common brick, with a V-shaped notch in one side of each, should be made. A joint can be set and held firm with the blocks much easier than without. The blocks supporting one end of the pipe may be tilted a little from the joint before the weight to hold the pipe is applied, for the weight tends to straighten the blocks and keeps the joint firmly pushed together.

PRACTICE FOR THE BEGINNER.

The beginner should have a small furnace beside him and leave the pot in it while practicing; he can then put the cold solder back at intervals and continue to pour off and rewipe without intermission. If the soil comes off too easily, paste a ring of paper about 1 inch wide on each side of the joint, which will stand the rubbing of the cloth better than soil. A novice will make better headway by practicing the pouring and dropping of solder without attempting to wipe for a week or two. The beginner can do no better than to imitate the motions of those who know how, without trying to comprehend why. Experience will teach a few things which words cannot explain to those not initiated.

Solder for joining supply pipe should not be coarser than three parts lead to two parts tin. The wiping cloth for any point, except small branch joints, may be about 3 inches square. Small branch joints are more easily made with a cloth about 2x21-2 or 3 inches in size. Wiping cloths made of bedticking should be from 9 to 12 double thick of the best quality of ticking, so folded as to leave no raw edges exposed. Cloths made in the above manner only need to be tacked in the centre of one side with good thread. Moleskin cloths are pre-

ferred by some plumbers and can be found at all plumbers' supply houses. Ticking cloths should be singed to destroy all loose threads and lint, which cause solder to stick to new cloths. The first two layers on each side of new cloths should be well soaked with tallow to render them soft and pliable. If soaked entirely through the cloths get too hot to hold. Very large cloths are used to catch the solder when making joints upon large soil pipe, but the ordinary 3x3 inch cloth is used to do the wiping with; also plumbing irons are used to retain the heat in the solder when making large wiped joints. In cold weather it is a good plan to stop the pipe with paper to prevent the circulation of air while wiping.

We will suppose that a joint is prepared and set, that the solder is hot (dull red) and that a piece of cardboard has been placed under the cleaning to catch the solder. The operator should then take the cloth in his left hand, push it forward until the tips of his fingers are covered; then take a ladle full of solder and first skim and stir it well to thoroughly mix the lead and tin. Never stir solder until ready to use it. When all is quite ready, hold the cloth under the cleaning and commence to drop the solder drop by drop upon the cleaning, gauging the number and size of the drops according to the heat of the solder. A few drops of very hot solder will, if poured in the same place, melt a hole in the pipe. For this reason keep moving the ladle. When a little solder has run down upon the cloth put it upon the pipe again. When it runs down again hold it there to warm the bottom while you drop more about the edges, even extending as much as 2 inches upon the soil of each edge, this will warm the edges and leave heat in the pipe adjoining the edges, thereby allowing the operator to finish the joint before the edges get too cold to wipe. When the operator has warmed the pipe and there is sufficient solder upon the pipe; if hot enough it will have a tendency to run off; but it must be caught and pushed up again. Then with the aid of the thumb or another cloth push the solder around and get it into the shape of an egg as quickly as possible. It may be necessary to pass the solder around the pipe from top to bottom in order to prevent dripping. When forming a joint the main point is to have the solder hot enough, and get it formed with the heat as uniform as possible. Should you attempt to wipe a joint with

cool solder on one side and dripping upon the other the cloth would pull the cool solder with it, destroying the form and efficacy of the joint.

When the solder is formed in the proper shape, spread the middle and index fingers, keeping the body of the cloth over the space between the fingers with the thumb. Then draw it quickly and evenly around the joint, wiping off all the surplus solder and leaving a smooth bulb of uniform proportions. If the joint was properly formed and wiped, it will be evenly spotted when cold. Beginners usually draw the cloth across the joint lengthwise to cut off the solder pulled around by the stroke of the cloth. A good plumber can finish a joint while it is hot enough to sweat in the last marks of the cloth.

When making an upright joint, place a piece of cardboard about the pipe, and use a small paddle-shaped stick to spit the solder against the joint until it is hot enough to run down the pipe, then substitute the cloth. Have the shave-hook ready to hook off any cold, sticky solder that might tear the cloth. A small block of wood or a ball of paper must be laid upon the cardboard against the pipe to separate the solder, otherwise it may have to be melted off with the copper bolt. A solid pipe shaved and soiled is just as good to practice upon as though it was well prepared, but wiping does not teach a boy how to prepare a joint.

A word in closing. Do not get discouraged; there are other things to learn as well as joint wiping. Although your neighbor learns to make the joints the quicker, you may acquire the general principles and good judgment first.

Canadian Enamelled Ware.

In a recent issue of Hardware and Metal the hope was expressed that "the time would soon come when all plumbing goods used in Canada would be produced within the Dominion." The Standard Ideal Sanitary Co., Port Hope, Ont., evidently intend to help in a practical way toward this end, at least as far as enamelled ware is concerned. They have started the erection of a large two-storey brick warehouse of the same style and design as their present factory building; also an iron building to cover their smelting and enamelling furnaces, large enough to take in three additional furnaces, which they anticipate building in the near future, and will also cover large gas producers.

TORONTO PLUMBERS HAVE A GOOD TIME.

If no other benefit were the result of the organization of the Toronto Master Plumbers' Association than the cultivation of a warm spirit of social fellowship among the plumbers of Toronto, its existence as an association would still be more than justified.

On Monday evening the association held its first social evening for the 1904-1905 season. Despite the general interest in politics the meeting was well attended and a most enjoyable time was spent.

Harry Beavis, chairman of the entertainment committee, was in the chair, with President Robert Ross at his right hand. Mr. Beavis' address was short and snappy. He was pleased to see so many of the members present, also to greet the representatives of the supply houses. He stated that arrangements had been made for a debate, but the latter had been postponed and full preparations made for a progressive euchre tournament, with dominos and checkers as side attractions.

Messages of regrets were read by Secretary Meredith from W. H. Carrick and T. B. Alcock, of the Gurney Foundry Co.; C. H. Brittain, of the Fairbanks Co.; A. A. McMichael, of the James Robertson Co.; Peter McMichael, of the Dominion Radiator Co., and others.

The following were noticed at the tables: President Robert Ross, J. B. Fitzsimons, of Keith & Fitzsimons; Alex. Purdy, of Purdy, Mansell & Co.; W. L. Helliwell, of the Gurney Foundry Co.; Geo. Clapperton, of Bennett & Wright Co.; Joseph Morris and E. A. Rogers, of the James Robertson Co.; C. M. B. and D. C. World, of the James Morrison Co.; Peter Jessamine, Kenneth Allison, Geo. Cooper, L. Legrow, R. Harrison, Fred. Armstrong, A. McArthur, James E. Fullerton, J. J. McKittrick, of the Toronto Furnace Co.; W. J. Spence, of the Ontario Lead & Wire Co.; G. K. Gouinlock, of the Toronto Hardware Co.; W. B. Malcolm, James Pickard, R. T. Robinson, Secretary W. H. Meredith, Harry Beavis, John Torpy, John Fullerton, J. E. Fullerton, R. G. Leaman, Angus Macpherson, T. Thompson, W. J. Mason, J. S. Knott, E. A. James, Richardson Bros.; J. Richardson, T. H. Hutcheson, Mimms; D. McMullen, N. McMullen and A. H. Stinson.

The games were as a rule keenly contested. Several times during the evening quartets got together who had old scores to settle and every point gained was hailed with shouts of joy, and victory loudly acclaimed.

After an hour's keen enjoyment points were counted and W. L. Helliwell, of the Gurney Foundry Co., was accounted the winner of top prize, and J. E. Fullerton the winner of the booby.

After the final game was declared refreshments were informally served. This part of the programme seemed almost as popular as the preceding part. Any person who has doubts of the efficacy of associational work would only need to see once the Toronto plumbers get together in a social way to understand the value of friendly organization.

In presenting the prizes President Ross, in his own humorous manner, advised Mr. Helliwell not to be like the fellow he heard of on his recent trip to Scotland. This man had got a fine umbrella and was so proud of it that when he went to lunch he left it in the hat rack with a tag on it bearing the following: "The owner of this can

ton, Kenneth Allison and Peter Jessamine.

Displaying Plumbing Goods.

MANY plumbers fail to take advantage of the possibilities of plumbing goods for display purposes. In some cases the goods are left in the shop in such disorder that the buyer never gets a fair impression of their beauty.

There has of late been an improvement in this regard, however. In the larger cities some of the leading firms have used every art and influence to make the show room attractive, with the result that some of these plumbing establishments are almost as enticing to the average householder as any stores in the city.



Exhibit of Plumbing Goods by James Morrison Brass Mfg. Co., Toronto.

strike a 150 lb. blow, and will be back in 15 minutes."

He enjoyed his little joke until one day he came to look for his umbrella, but found only the tag, on which he read: "The possessor of the umbrella this is off can run 15 miles in an hour, and won't be back."

Mr. Helliwell promised to keep better watch of his new umbrella than the Scot did.

After President Ross had unwrapped and turned into the possession of Mr. Fullerton a long-stemmed, capacious-looking pipe, Mr. Harrison moved a vote of thanks to the entertainment committee for the pleasant time and the excellent refreshments they had provided, the motion being carried with enthusiasm.

The committee were: Harry Beavis, chairman; Geo. Cooper, Geo. Clapper-

The possibilities of a plumbing display are well illustrated in the accompanying view of part of the exhibit made by the James Morrison Co., Toronto, at the National Exhibition, Toronto.

Though only about half of the display is shown the view impresses one instantly with the attractiveness of the arrangement of plumbing goods.

It is the fact that few houses carry such a complete line of plumbing goods as the James Morrison Co. had in this display, yet one can readily see from it the possibilities of a pleasing arrangement of stock. How much better it is to have the goods shown to such advantage than to have them piled up in careless disorder in the store. And the time has come when attractive plumbing goods are much sought by the average householder.

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HEATING BY STEAM OR HOT WATER.*

By ROBERT W. HARRISON, Toronto.

LOOKING into the early history of heating by steam and hot water we find that in 1837, in England, Mr. Angier M. Perkins (who was a son of Jacob Perkins, an American, formerly of Newburyport, Massachusetts), had invented and was installing several hot water systems of heating, which may be briefly described as follows: A closed tank system which was constructed almost exclusively of three-quarter tubing. The boilers were of the box coil type and were made in one continuous length, there being no fittings other than couplings used in their construction, and all bends were made in the tubes. The radiating surface consisted of similar coils made entirely without fittings and were not provided with valves for regulating the circulation owing to the danger of explosion, for if they were used and closed, pressure would be thus unduly raised by concentrating the heating effect on a lesser surface. Although there was an expansion tank on top of the apparatus it was not usually provided with a safety valve. All the couplings above referred to were made of wrought iron and were tapped right and left; the ends of pipes being then tapered inside and out the screwing up of the couplings brought the tube faces together, thus making a perfectly tight metal joint without packing. After being put up each apparatus was tested to three thousand pounds hydraulic pressure and not deemed safe unless it was found entirely free from leakage under this strain.

It will thus be seen that the only element of safety had was that the radiating surface should be so great in extent as to part with a greater amount than the surface in the fire could absorb from the products of combustion, thus preventing an increase of pressure beyond a limit of safety. To have introduced valves for the purpose of shutting out any portion of the system would therefore have been dangerous and one of the chief objections to the system was that heat in any given room could not be controlled independently of the rest.

We also find that a forced circulation for hot water was used in England a great number of years ago, as the following brief sketch of such a system having been constructed by Messrs. Easton & Anderson in Banstead lunatic asylum will show:

The whole hot water service is supplied from boilers placed at one end of the asylum buildings which extend to a distance of several hundred yards. There are two pipes, one of them, which may be called the flow pipe, is connected di-

rect with the boiler, terminating at the point farthest from the boiler in a dead end; the other, which may be termed the return pipe, is parallel to the first and terminates at one end in a cistern which is placed about 6 feet above and supplies the boiler, at the other end farthest from the cistern the second pipe also terminated in a dead end. At each pavilion or place to which hot water is required to be conveyed there is a connection between the two pipes which can be closed or opened at will. When it is opened the water can pass from the flow to the return pipe. In the second or return pipe near the point where it ascends to the cistern is placed a rotary pump or fan wheel which is always kept revolving. When the openings are all closed between the two pipes this pump simply slips through the water, but as soon as the return pipe obtains a supply of water from any of the openings between it and the flow pipe, a circulation is established. The adoption of hot water and steam heating on modern lines has been a slow process in England and it was not until a few years ago that any quantity was done at all, but we find at the present time a fair amount being done.

We will now take up a little of the earliest history of hot water and steam heating in the United States.

In 1837 Joseph Nason, then in the employ of the Boston Gas Light Co., invented and patented the "Argand" gas burner and went to England for the purpose of interesting English manufacturers or capitalists to take hold of it, the use of gas being at that time very much more common there than in the United States. Mr. Nason went to London, and after numerous futile efforts to introduce the Argand gas burner, accepted an offer from Mr. Perkins to superintend the construction of hot water systems in London and elsewhere. During the time that Mr. Nason was in England he put up a number both of heating apparatuses and boilers, thereby becoming thoroughly familiar with the system, which impressed him favorably as one which could be used with great advantage in the United States, when people were willing to pay for it, for it was then a somewhat costly luxury.

BIRTHPLACE OF STEAM HEATING.

There is no question that the store No. 36 Ann street, New York, was the birthplace of the steam heating business in the United States. It was in that store, in 1839, that James Boyce, an Englishman, placed on sale a small stock of butt-welded pipe, two-inch diameter and under, in addition to some other articles which he had brought over from

the Old Country (no pipe being then made in the United States). This stock was bought by Mr. Walworth in June, 1841, after correspondence with Mr. Joseph Nason, who was then in England, with the idea of both dealing in pipe and constructing the Perkins hot water apparatus. Mr. Boyce then left for home, but Mr. Gardner D. Hiscox, his clerk, remained at the New York store for some time. Mr. Walworth carried on the business until 1842, when Mr. Nason returned, and the firm of Walworth & Nason, so well known to the last generation, commenced its active existence. Both Mr. Walworth and Mr. Nason belonged in Boston, and they naturally considered that city a good field for putting in heating apparatus, so they arranged to rent the store No. 18 Devonshire street, built especially for them, and in June, 1842, began business.

FIRST HOT WATER HEATING JOB.

In the Autumn of 1842 Walworth & Nason put in their first heating apparatus of the Perkins hot water type, at the counting-room of the Chiddlesex Co., of Lowell, Mass. The boiler of this and subsequent apparatus was simply a circular coil of one continuous tube, such as Mr. Barker afterward adopted in his car heater, which is nothing more or less than a Perkins apparatus adapted to a railway car. Although Mr. Perkins' practice was to use no valves, Mr. Nason found that in dwelling house apparatus it was better to divide the radiation into several sections for the various rooms to be warmed. He consequently devised a stop cock of a peculiar construction, with a stuffing box, not intended to make a perfectly tight-closing of the circulation, but tight enough to reduce it to a minimum, so that the temperature of each room could be regulated independently. This arrangement thoroughly effected this, but both Mr. Walworth and Mr. Nason thought it not quite safe to construct an apparatus in which all the surface might be shut off at once, so they decided to discontinue that type of apparatus and place all the heating surface in a chamber or chambers in the basement, with warm air pipes leading to the several rooms, or precisely the indirect apparatus of today.

Such an apparatus was placed in the house of the late Ebenezer Milliken, No. 15 Ashburton place, Boston, probably in 1845, where it is still in successful operation.

(To be Continued.)

* An address delivered before the Toronto Master Plumbers' Association.

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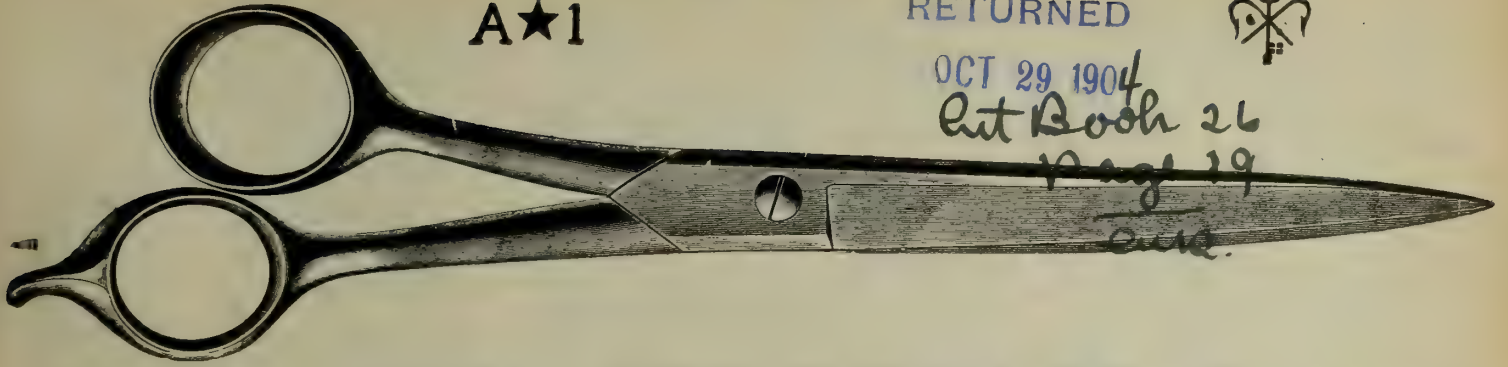


OCT 29 1904

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Page 19

one



F. W. LAMPOUGH & CO., Montreal

PIPE THAT IS PIPE.

THIS IS OUR BRAND

P-H



You Want It.

See that You Get It.



THIS IS OUR TAG.



BLACK AND GALVANIZED.

TAKE NO OTHER.

PAGE-HERSEY IRON AND TUBE CO., LIMITED, GUELPH, CANADA



THE GREATEST DISPLAY at the Exposition was our wonderful NETHERY PATENT FLUSH VALVE

the device that does away with the tank in closet outfits. Splendid profits for dealers and plumbers are offered on this new device. Write for details.

JAS. MORRISON BRASS MFG. CO., LIMITED
TORONTO, ONT.

Money Back—Quick

All you have to say is that you are not satisfied with

**STERNE'S
Asbestos
Furnace
Cement**

Return the goods and get your money.
This is but another way of saying
that this cement is the best made.

Circular proves it—send for it.

G. F. Sterne & Son, Sole Makers, Brantford, Ont.
J. H. Hanson, 422 St. Paul St., Montreal, Eastern Agent.

WATERPROOF

The roofing that is absolutely waterproof is the only one that you should consider for your building. Tin and galvanized iron roofs rust and corrode, causing leaks; and shingles are also unsatisfactory on this account, and because of their inflammability.

REX FLINTKOTE ROOFING

is treated with our own compounds that make it waterproof and fire-resisting. It is used on thousands of factories, farms and dwellings in the United States and Canada. Anyone can lay it.

Our book, which we will send free, together with samples, will give you valuable points on roofing.

J. A. & W. BIRD & CO.,
49 India Street, Boston, Mass.

"LOOK FOR THE BOY" ON EVERY ROLL

Building Notes.

Arcola, Man., is to have a \$6,000 town hall.

A new Anglican church is to be erected at Fernie, B. C.

Tenders are being asked for the new Winnipeg post office.

Thomas Steel is erecting a business block in Coleman, Man.

A \$7,000 immigration hall is to be put up at Brandon, Man.

A new Y. M. C. A. building will be erected at Brandon, Man.

Dr. E. Morin, Quebec, is about to erect a five-storey building.

The Dominion Express Co. propose to erect a new building in Kingston.

The town of Levis, Que., is to have a new post office and customs house.

A new bank building is to be erected for the Crown Bank in Burford, Ont.

M. Swift is erecting a house to cost \$1,500 on Ste. Cecile street, Quebec.

The erection of the new German club building in Winnipeg has been commenced.

The Edmonton Brewing & Malting Co., Edmonton, N. W. T., are spending \$11,500.

The Canadian Northern Railway have the plans ready for their new station at Winnipeg.

A new lands titles office is to be erected at Neepawa, Man., by the Dominion Government.

A business block is to be built in Innisfail, Alta., by F. F. Malcolm for G. T. Lundy.

J. M. Chisholm is to put up a residence, heated by hot water, on Donald street, Winnipeg.

S. H. Reist, contractor, has the contract for a power house at Wetaskiwin, Man., at \$2,038.

The Union Supply Co. have let the contract for a new elevator at Rosethorn, N. W. T.

The Lethbridge, N. W. T., school board propose making extensions to the north ward school.

Architect Fraser, Indian Head, N. W. T., has plans ready for a church and a hotel at Abernethy.

A new Presbyterian church is being erected at Fort Frances, Ont., and one at Rocanville, N. W. T.

J. A. M. Aikens is erecting a five-storey 132x130 ft. business block on Portage avenue, Winnipeg.

Lethbridge, N. W. T., will exempt from taxation a new depot and freight shed to be put up by the C. P. R.

Strathcona, N. W. T., is preparing to build a power house across from the Edmonton power house, which is just being completed.

The Manitoba Provincial Government intend spending \$7,500 in improvements to the heating and power plants at the Brandon asylum.

Pheasey & Batson, contractors, Edmonton, have the contracts for a house for Malcolm Groat and for brick work on the new Edmonton school.

The plans for the new Y. M. C. A. building in Owen Sound have been prepared, and it is expected that sufficient capital will be raised to commence building soon.

Heating and Plumbing Notes.

The Rossland, B. C., waterworks system will probably be improved.

A waterworks system will probably be installed at Red Deer, N. W. T.

The Canada Foundry Co. are supplying Port Arthur, Ont., with 6-inch pipes.

North Vancouver council have invited tenders for trenches and wire-wound wooden stove pipes, for a waterworks system.

W. Meredith, of the Vancouver Power Co., is considering a proposal to operate the Vernon electric light plant by water power.

The contract of heating and plumbing the new city hall at Moose Jaw, N. W. T., has been let by Architect W. D. Albrant, Fargo, N. D.

Boilers for steam heating in block for W. J. Ross and James Murphy, Fort William, have just been installed.

Ross Bros., Edmonton, N. W. T., have the contract for the municipal buildings at Edmonton.

Joseph Harrison, steam and hot water fittings, of 608 Yonge street, Toronto, has received the contract for installing apparatus for heating purposes in the new building of Copp, Clark & Co.

Building Permits.**MONTREAL.**

D. Leclaire, Lasalle street, one house, \$1,500.

C. Deuguire, Nolan street, one house, \$3,000.

J. A. Clerous, Marquette street, one house, \$4,000.

A. Tremblay, Joliette street, one house, \$2,000.

J. O. Gravel, 66 St. Antoine street, one store, \$2,800.

J. A. Jacobs, alteration on store, St. Paul street, \$19,000.

Mrs. E. St. Germain, Mount Royal avenue, one store and dwelling, \$7,000.

J. Sawyer, St. Antoine street, one building, three stores, three houses, \$3,000.

Thomas Robertson & Co., Limited, corner Common and Dalhousie streets, one warehouse, \$6,000.

TORONTO.

Joseph Armitage, dwelling 149 Arthur street, \$2,000.

A. Batho, dwellings, 10 and 12 Have-lock street, \$4,800.

W. R. Melmer, dwelling, 302 Ossington avenue, \$1,500.

John Care, dwellings, 56 and 58 Mill-cent street, \$1,400.

Thomas McIlwain, dwelling, 60 Springhurst avenue, \$4,000.

James Burford, dwellings 146, 148, 150 Howland avenue, \$7,000.

Kent estate, dwellings corner Maynard and Farley avenue, \$9,500.

Hartley Gibson, dwellings near College street on Grace street, \$3,000.

Mrs. E. Mallord, dwellings, 552 and 554 Dovercourt road, \$5,000.

William Patterson, dwellings, 420 and 422 Ossington avenue, \$4,300.

A. Nelson, stone dwellings, near Ulster street on Manning avenue, \$8,000.

J. J. Walsh, dwellings corner of Close avenue and Queen street, \$18,000.

D. Kirkpatrick, dwelling near Harrison street on Shaw street, \$2,600.

Daniel Schwalin, dwellings near Bloor street on Concord avenue, \$3,000.

J. J. Walsh, dwellings on College street and Delaware avenue, \$30,000.

J. D. Farquhar, dwellings near Broadview avenue on Bain avenue, \$3,000.

Geo. C. Watson, dwellings near King street, on east side Close avenue, \$5,000.

Arthur Bryce, dwellings near Queen street on east side Carlaw avenue, \$4,400.

H. W. Love, dwellings near Bolton avenue on south side First avenue, \$6,000.

William Moss, dwellings on east side Sheridan avenue, near Dundas street, \$3,600.

Isaac W. W. Plewes, dwellings, near Rathnally street on south side McMaster avenue, \$5,000.

J. F. McGarry, hotel alterations only, on northwest corner of Queen and Dundas streets, \$5,000.

Wm. Neilson, factory, dwelling, stable, one-storey shed, near College street on east side Gladstone avenue, \$15,000.

Mrs. E. Williams, dwelling near College street, on east side Bathurst street, \$2,500.

Have you
tried it?

Tried what?

**SELLING
MANTELS.**

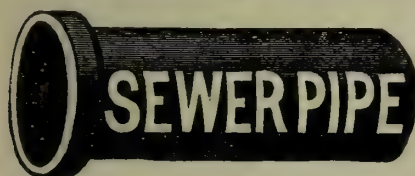


This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

FULL STOCK

Salt Glazed Vitrified



Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.
HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

**A PERMANENT
and Handsome Roof.**



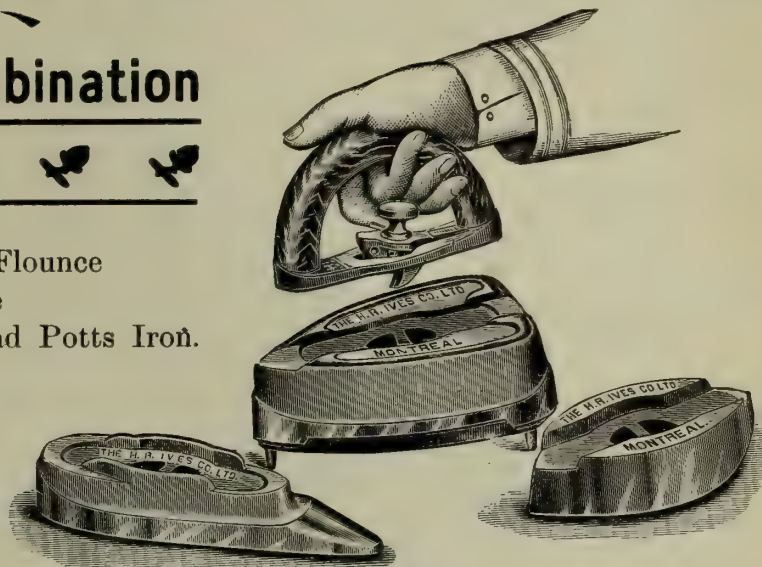
Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to
lay, all ready covered with gravel. Requires no experience to lay, and lasts
for years without further attention.

A. C. JENKING, Sole Agent,
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Sole agents being appointed in each district. Write to-day.

NEW
**Combination
Set**

Pressing, Flounce
and Sleeve
and Potts Iron.



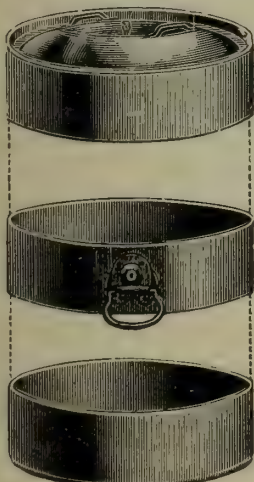
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The H. R. IVES CO., Limited, Manufacturers, Montreal

For durability, finish and economy in making up

DAVIDSON'S Broad Hoop, Heavy Roll Rim
Bottom Milk Can Trimmings
are unequalled.

Patent



In Complete Sets

"BROAD HOOP" Pattern - Com-
posed of the following: 1 Broad
Hoop Bottom, 1 Cover, 1 Centre
Hoop 6 inches wide, 20 gauge,
1 Broad Top Hoop, 1 pair Cover
Handles, 1 pair Side Handles.

Popular Features

Our Broad Hoop Bottom is built to defy hard
usage and has all the advantages of a seam-
less bottom, without the strain that spinning
entails.

Bottoms can be sweated in, using little solder.

Bottoms are concave, draining to the centre, and
are therefore easy to wash out, and will not
corrode.

Heavy Rolled Edges makes our Patent Bottoms
doubly durable and factory and waggon floor
protectors.

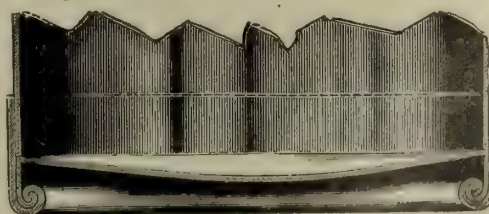
Top Bands are Shouldered and all bands have
retinned edges.

We can also supply best quality
Tinned Iron at lowest market prices.

The Thos. Davidson Mfg. Co. Ltd.
MONTREAL



See how the Outer Rim and Inner are rolled in and
Riveted to Bottom Hoop as well as being rolled
together.





3 Selling Lines

Solarine Metal Polish.
Japanese Pipe Varnish
Shino Stove Enamel.

Write for prices.

H. F. FALKNER,
60 George St., TORONTO

None so Good

in Metal Polish as

YORK METAL POLISH

Liquid or Paste

Contains no acid;
Cleanses and polishes at one operation;
Will not scratch the finest surface.

Free Sample on Application.

Anglo-Canadian Supply Co.
29 Church St., TORONTO.

Oakey's The original and only Genuine
Preparation for Cleaning Cutlery. 6d. and 1s. Canisters

'WELLINGTON' KNIFE POLISH

JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

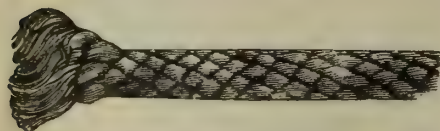
Emery, Black Lead, Emery, Glass and
Flint Cloths and Papers, etc.

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Buy the Best.



HERCULES

Sash Cord.

Star Brand Cotton Rope
Star Brand Cotton Clothes Lines
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For Sale by all Wholesale Dealers.

STOVES AND TINWARE.

Cooking With Acetylene.

By J. K. Rush

THERE seems to be a general impression that acetylene is useful only for light. Why such an erroneous idea should have gained ground it is almost impossible to determine.

It is an actual fact that nine out of every ten people that we may approach to-day, if the statement that acetylene is desirable for cooking and heating purposes is made, they will stare in utter amazement and will say they were under the impression that there was no heat to acetylene.

One of the best features of acetylene as an illuminant is the fact that there is but very little heat thrown out in the room where the gas is used for lighting, and it is right here that many people form the wrong opinion with regard to acetylene. They do not seem to understand that when the gas is used for lighting purposes that a comparatively small quantity of oxygen is used therewith in the open burner, and that it really contains wonderful heating qualities when mixed with the proper proportion of oxygen.

QUANTITY OF OXYGEN VARIES.

The exact quantity of oxygen used to produce perfect combustion varies somewhat according to the construction of the burner and the pressure of the gas at the burner. Authorities differ slightly as to the exact amount of oxygen required to produce the best results in a bunsen flame.

One of the greatest drawbacks in the construction of acetylene heating and cooking apparatus has been the fact that acetylene is so rich in carbon that it is next to impossible to blend the oxygen with the acetylene to bring about the results desired.

GAS RANGE SUPERIOR TO COAL STOVE.

The success which has been attained by those engaged in the manufacture of heating and cooking appliances for acetylene has only been brought about by their untiring perseverance to bring about a burner properly constructed for the work, and at the present time there are at least two concerns in the U. S. who have solved the problem of heating and cooking with acetylene, and are successfully producing appliances such as open hot plates, cake griddles, laundry burners, tailoring irons, and finally, a complete gas range, one of which has

been in actual use in the home of the writer for a long time, having used the gas upwards of two years for heating and cooking purposes, and at the present time we would rather part with the coal stove than our gas range if we had to dispose of either.

OVEN WORKS WELL.

The oven does its work to perfection. The heat is under absolute control at all times. It does its work quickly without smoke or odor either in the stove or culinary department.

The writer has gone so far as to install in a southern home a plant from which acetylene furnishes everything in the line of heat, light and general fuel purposes.

In this instance a large acetylene range was installed in the kitchen. The 30-gallon hot water tank is heated with acetylene, while various other heating and cooking appliances are distributed throughout the house and there is actually nothing in the line of wood or coal heating appliances in the home.

ACETYLENE IS PRACTICAL.

It would be very hard indeed to convince any one who has put acetylene to these uses of the fact that acetylene was not practical for cooking purposes. It is simply ignorance on the part of those who make these statements, and we invariably find that they are only too glad to know that they are mistaken in this matter.

The writer of this paper wishes to deal with the practical end of the work and leave out the technical points, so far as the construction of burners, etc., is concerned.

It really would be very amusing to be present and overhear the conversation which might take place if any one who did not know that acetylene was such an excellent commodity when considered for cooking purposes, should endeavor to argue that point with some dear housekeepers that the writer has in mind, who are simply enthusiastic over their acetylene range and heating devices.

The old adage is, "The proof of the pudding is the eating thereof," and one invariably believes in that which he sees with his own eyes.

LADIES SCORE A VICTORY.

It is safe to say that these ladies who have used acetylene in their gas ranges would at once prove their side of the question by trotting out biscuits, bread and cake with that beautiful crisp brown tint which is absolutely impos-

THE "GOOD CHEER"

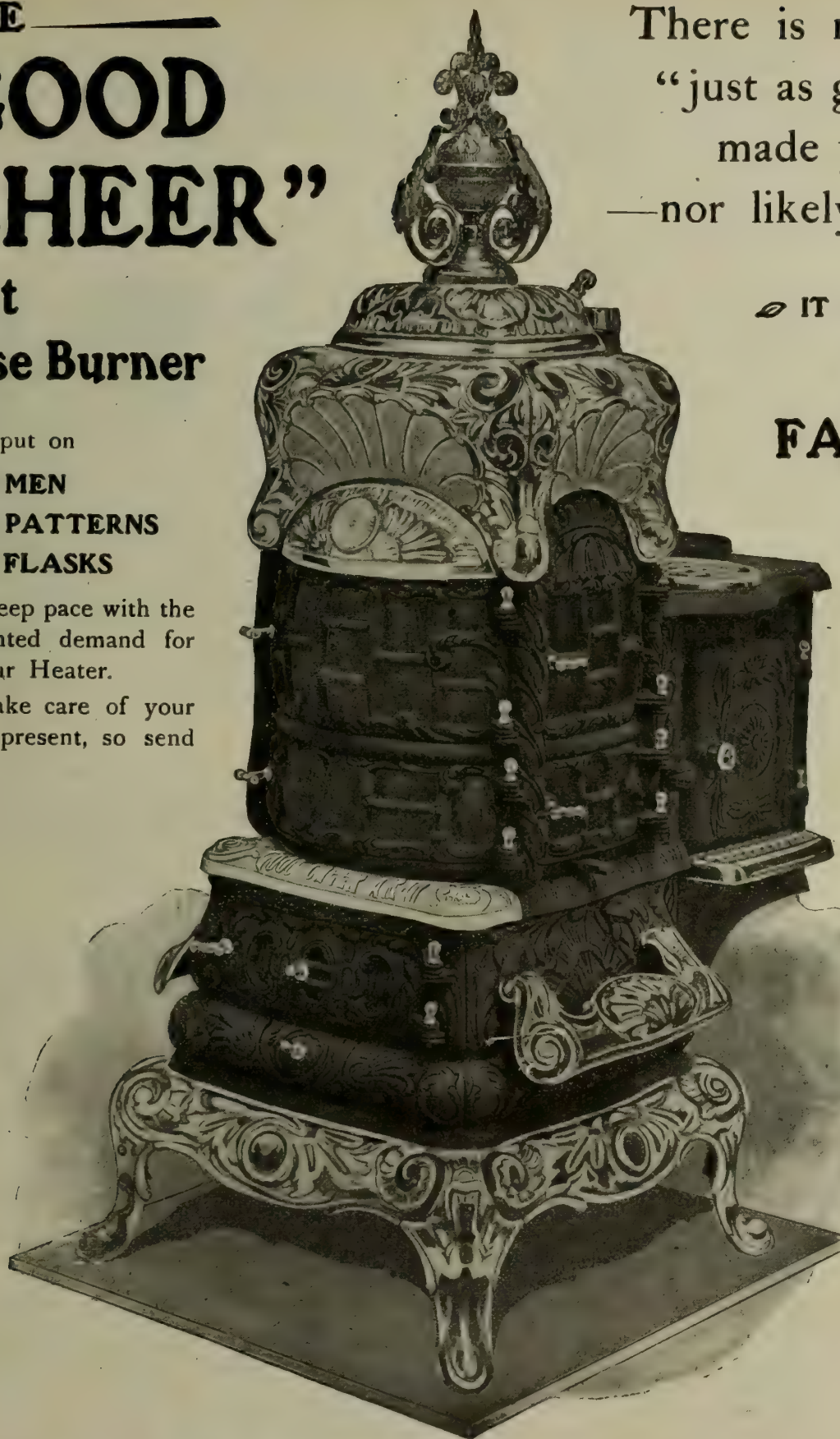
Art Base Burner

We have put on

**MORE MEN
MORE PATTERNS
MORE FLASKS**

so as to keep pace with the
unprecedented demand for
this popular Heater.

We can take care of your
orders at present, so send
them on.



There is nothing
"just as good"
made yet
—nor likely to be.

IT HAS
**NO
FAULTS**

Firepot removable
without turning a
single bolt.

Has Duplex Grate
and large ash pan.

Every stove a
Double Heater.

Has Steel Oven.

With or without
oven.

The JAMES STEWART MFG. CO., Limited
Woodstock, Ont. and Winnipeg, Man.

sible to be obtained excepting in an oven in which it is possible to produce the proper amount of heat at the right time, and ask the dear fellow who tried to prove to them that acetylene was not practical for cooking purposes to sample the goods and see if he would not change his mind on this subject.

The writer will bank on it that the ladies would score a victory for their acetylene range.—American Artisan.

Winter Strain on Roofs.

NOTWITHSTANDING that the weather of the late Fall does not make outdoor work the most pleasant employment for the tinsmith, it is far better than half time, when the approach of Winter shuts down on some of the repair work in the shop that has kept the sheet metal worker employed earlier in the season. A very successful concern has, says the Metal Worker, made it a custom for a number of years to call the attention of its patrons to the severe strain which the Winter season puts upon the roof. A circular is sent out to the customers of the concern advising that all seams be looked over, and those which show any weakness be made strong by soldering; that the conductor pipes be strengthened up, so far as the hangers and braces are concerned; and where eavetroughs are used that they also be provided with new braces where needed. The condition of the roof in regard to painting is important. Freezing and thawing, dry and wet conditions and frequent changes of temperature all have a tendency to break the paint and cause it to scale. If the surface of the roofing plate is not painted and should the coating at any point be thin, rust is likely to occur that will eventually result in holes in the roof. Those roofers who have made some study of the requirements as to the material to be applied to roofs at different seasons know that a good paint that can be well rubbed in should be used in the colder weather. When the proper material and tools are provided a good deal of profitable work can be secured for the shop by bringing the attention of customers to the need of repairing the roof to stand the Winter's strain.

Creosote From Wood Furnace.

IN answer to a Portage la Prairie, Man., correspondent, who reported difficulty with creosote dripping from his smoke pipe, and wished to know of some remedy (the pipe was 7 inches in diameter and led from a small brick ret wood furnace; it ran straight up from the T through the first story into the second story, where it had a horizontal run of about 10 feet,

and entered the chimney at a slight angle), the Metal Worker says: Doubtless there are a number of our readers who have had considerable experience with smoky chimneys, and whose experiences would be of interest to "C. D. F." and others similarly troubled, especially if accompanied by an account of the remedies adopted and their success. In the meantime we would say that the trouble as outlined by our correspondent is common among users of wood furnaces. The burning wood, no matter how dry it may be, gives off a considerable amount of moisture. The condensation is increased, in this case, by the long run, the elbow at the entrance to the chimney, and the large diameter of the pipe. The generally accepted remedy in such cases is to reverse the lap of the pipe, allowing the condensation to drip toward the furnace. Advantage will be gained if the pipe is cut down from a 7-inch to a 6-inch pipe. This will give a higher velocity to the products of combustion, in consequence of which they will enter the chimney at a higher temperature, thus causing a smaller condensation in the pipe.

A New Fuel Invented.

A NEW fuel called radiant, to be used in connection with gas and other fires, has been invented, says the Daily Mail of London, by two young engineers of Southend, England, and if it be proved that it can do all that is claimed for it it will cause as great a revolution in the present system of gas heating as did the introduction of the Welsbach mantle in gas lighting. The inventors claim for radiant: First, that it gives treble the heat with the same gas consumption as an ordinary gas fire; second, that it takes up the carbonic oxide from the air and purifies the atmosphere; third, that it does away with the unpleasant smell given off by gas fires; fourth, that it burns brightly like a coal fire; fifth, that it is as cheap as fire clay and is inexhaustible.

The two young inventors are connected with one of the largest firms of gas engineers in the country, and have been experimenting for years with a view to producing a fuel such as radiant. Radiant will take the place of the asbestos or fire clay balls, and will, it is said, give out an intense heat. It is made from materials that are now waste products of chemical works. The new fuel captures the blue flame, which at present is lost, and converts it into intense heat. Radiant is also said to possess the power of retaining heat to a very great extent.

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FORWARDING and DISTRIBUTING AGENTS,
FREE AND BONDED STORAGE**

TURNBULL & HENDERSON, Vancouver, B.C.

**Cooper's Improved Patent
One-Piece Stovepipe Elbows.**



The Heaviest and Best Elbow on the market. Measures 23 inches long at the back. Send in for sample dozen. Polished or Common.

E. T. WRIGHT & CO.

Manufacturers and Sole Patentees,
Hamilton and Montreal.

**THE FISHER
TUBE
SKATE**



**THE LIGHTEST, STRONGEST,
EASIEST RUNNING AND
PRETTIEST SKATE
IN THE WORLD.**

Dealers:

It will pay you to handle the Fisher Tube Skate, there is a demand for them.

The large makers of ordinary skates are now compelled to make Tube Skates. It will take them years to get to our standard. Tube skates are not made like ordinary skates.

Write to-day for Catalogue and Prices.

The A. D. FISHER CO., Limited
34 Richmond Street East
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GRAND IDEA

The Range that Never Fails

ARE YOU DISSATISFIED with the line of Ranges you are handling? If so, get next to the **GRAND IDEA**. It will please both you and your customers.

Grand Idea Ranges look well outside; they are well made inside; and **BEST OF ALL**, they work well.

PRICE AND QUALITY CONSIDERED, the **GRAND IDEA** is the best Range Proposition on the Canadian Market to-day.

KNOWING RANGE DEALERS who have handled the Grand Idea are unanimous in their verdict—"It's Canada's Best."

Write us for Prices and descriptive literature: We are in a position to ship promptly.

GUELPH FOUNDRY CO., LIMITED
GUELPH, Ont.

WESTERN REPRESENTATIVES—
MESSRS. E. G. LOW & CO., Market St., Winnipeg



We make it easy for merchants to sell the

Imperial Oxford Range

First by making it the best cooking range on the market—then by making those superior qualities known to your possible customers.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

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THE GURNEY STANDARD METAL CO., Limited
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Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

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Galvanized Sheets

Cut Prices Made by Quality Right

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Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, - Montreal

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Manufacturers and Contractors
of

Metal Fireproof Windows

CORRUGATED IRON

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

A. B. ORMSBY LIMITED,

Cor. Queen and George Streets,
TORONTO, ONT.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Cariboo mining property in the Rossland camp, has been bonded to M. R. Galusha and Messrs. Eden and Morgan of the Great Northern Railway. The price is said to be between \$25,000 and \$30,000. The bond is for two years and calls for extensive and practically continuous development.

The Carney Lumber Co. are going to erect at Owen Sound what is claimed will be one of the largest saw mills in Canada. It will have a capacity of 20,000,000 feet, and 200 men will be employed. The town of Owen Sound are granting the company exemption from taxation for ten years.

The Diamond Park Mineral Water Co., propose to erect a large bottling works in Arnprior in the Spring of 1905 and are asking the town for a nominal assessment for ten years. Should this request not be granted the firm will probably build the factory in Parkenham township near the springs.

A despatch from Ottawa says: It is claimed that at the rate at which claims for lead bounty are being received at the Department of Trade and Commerce the \$500,000 statutory grant will not be sufficient to pay 75 cents per ton on the entire lead product of the Dominion. There will, therefore, have to be a reduction in the bounty all round.

A Canadian Associated Press despatch from London dated October 21, says: Strong objection was expressed by the Midland ironworkers yesterday at Birmingham against the proposal of Canadian and American pig iron makers to English and Scotch warrant brokers for the admission of their iron for sale by warrant on the Glasgow, Middlesborough and London markets. It is urged that the inclusion of Canadian and American warrants will accentuate gambling in crude material, and place the iron and steel industries at the mercy of unscrupulous speculators.

NOTES.

The municipal gas plant in Owen Sound has been damaged by fire to the extent of \$800; covered by insurance.

The coke blast furnace at the steel plant at Sault Ste. Marie has commenced operations. It is said that the charcoal furnace will be started shortly.

The Quebec and Lake St. John Railway Co. are going to build a branch line of railway from the Jacques Cartier River to the township of Gosford.

The Brantford Expositor says that the Brantford Screw Co. contemplate the erection of a large warehouse for storage purposes in the rear of their plant.

The Galt Reporter says that George Howes and George Booty are going to erect a factory for the manufacture of artificial stone and cement brick. The Reporter thinks there is room for such an enterprise in Galt.

COMPANIES INCORPORATED.

The Ballarat Mining Co., Limited, Toronto; capital, \$300,000; purpose to carry on in all its branches the operations of a mining, milling, reduction and development company. The directors are: J. S. Lovell, Wm. Bain, Robert Gowans, E. W. McNeill and R. Richardson, all of Toronto.

Leeds Lumber and Power, Limited, Brockville, Ont.; capital, \$40,000; purpose, to carry on a general timber and lumber business. The directors are: J. G. Gardner, F. B. Cossitt, C. T. Wilkinson, A. G. Bower and R. A. Bower, all of Brockville.

The Construction Corporation, Limited, Ottawa; capital, \$500,000; purpose, to carry on a general contracting and construction business. The directors are: B. Lowry, Quebec; A. P. Caron, K.C.M.G., J. H. E. Seireton, both of Ottawa; J. H. Jewell, Toronto.

Canadian Straw Fuel Machine Co., Limited, Toronto; capital, \$250,000; purpose, to manufacture and deal in straw fuel machines, farm implements and tools and to carry on a general foundry and machine shop business. The directors are: J. H. Macabe, W. D. Earnly and J. A. Morden, all of Toronto.

Canada Flax Fibre Co., Limited, Montreal; capital, \$100,000; purpose, to manufacture tools and appliances for the treatment of plant fibres, and to operate flax mills. The directors are: T. H. Tornbyll and J. Walker, both of Montreal; G. W. Fowler, Sussex, N.B.; G. A. Childs, J. H. Sherrard and S. P. Howard, all of district of Montreal.

WORK AND PRICES RIGHT

GALVANIZING ONT. WIND

ENGINE & PUMP CO. TORONTO, ONT. LIMITED.

The Hanover Portland Cement Co., Limited

HANOVER, ONTARIO.

Manufacturers of "Saugeen Brand" OF PORTLAND CEMENT.

Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works
"Machinery," Newport. NEWPORT, MON., ENGLAND

Will Hold Up a Shelf!

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanese, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,
New Haven, Conn., U.S.A.

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The American Hardware Store.

By R. R. Williams; 576 pages: 6 $\frac{3}{4}$ x 10 inches; 660 illustrations; bound in cloth\$3.00

Hardware Store Business Methods.

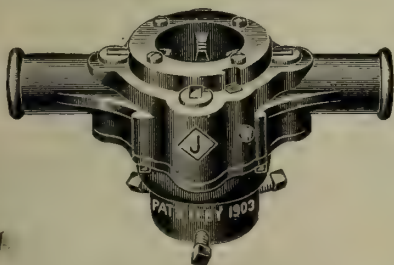
A series of articles dealing with business methods in the hardware store, by different authors; 227 pages: 5 $\frac{1}{2}$ x 8 inches; illustrated; cloth binding.....\$1.00

Enquiries for above books should be sent to

Book Department, **HARDWARE AND METAL**
TORONTO.

JARDINE PATENT PIPE DIES

GIVE GREAT SATISFACTION.



W. Schulkins, Steamfitter, Toronto, says: "My men prefer your stocks without a helper to the old kind with a helper."

A. B. JARDINE & CO.

Mfrs. TAPS and DIES.

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This design a guarantee of quality

Heavy Red-Brown Wrapping FOR EXPRESS PARCELS. STRONG, TOUGH AND STIFF

SAMPLES AND PRICES GLADLY SENT.

CANADA PAPER CO.
TORONTO LIMITED MONTREAL

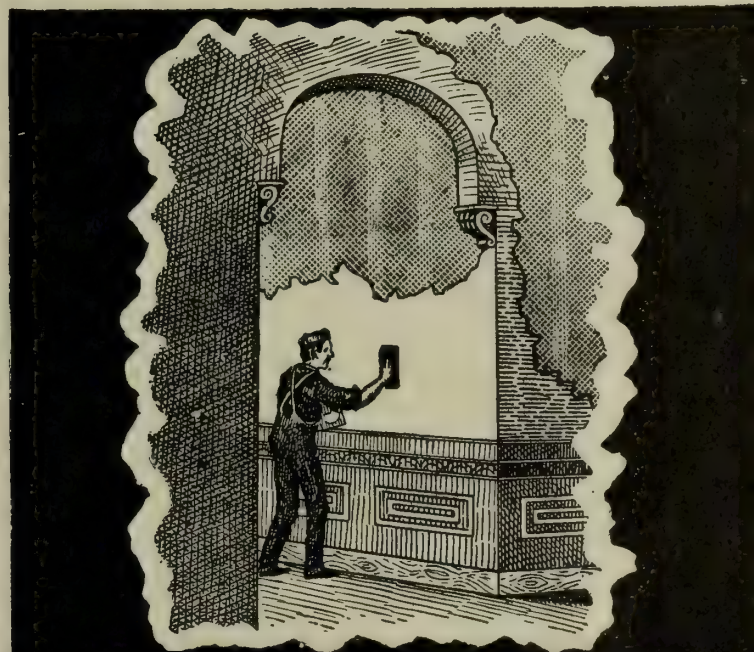
Reads like a Fairy Tale

We described our All-Metal Ash Sifter to a man once, and he thought it ought to sell for nearly \$5.00. When we told him it would sell for 25c, and yield the dealer a good profit, he almost fainted.

WHAT ASH SIFTER HAVE YOU TO TALK ABOUT?

SEND FOR A DOZEN OF OURS.

C. M. CUTTS & CO., *Patentees, Toronto Junction, Ont.*



Pedlar's "Perfect" Metal Lath

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.
24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.	
1-lb. tins, pure.	
Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 05
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.	
Pure in bbls., per cwt. Less than this quantity 4c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
"umber	6 00
Raw umber	7 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 08
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.	
Per 100 lb.	
Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorators' Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	5 00
Ramsay's Exterior	4 50

RED LEAD.	
Genuine, 560 lb. casks, per cwt	
Genuine, 100 lb. kegs.	4 75
No. 1, 560 lb. casks, per cwt	4 00
No. 1, 100 lb. kegs, per cwt	4 25

WHITE ZINC.	
Extra Red Seal	
French V. M.	0 06
Lehigh	0 06

DRY WHITE LEAD.	
Pure, per gallon	
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Anderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
Thistle	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PREPARED PAINTS.	
In ½, 1 and 1-gallon tins.	
Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Anderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
Thistle	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.	
Bulk in bbls.	
Bulk in less quantity	1 70
Bladders in bbls.	1 10
Bladders in kegs, boxes or loose	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.	
In 5-gal. lots. Per gal. Net.	
Carriage, No. 1	1 50
Pale durable body	4 10
"rubbing	2 85
Gold size, japan	1 50
Elastic oak	0 85
No. 1 brown japan	0 90
Furniture, extra	1 10
"No. 1	0 90
Hard oil finish	1 35
Light oil finish	1 60
Damar	1 75
Shellac, white	2 40
"orange	2 30
Turpentine, brown japan	1 10
"black japan	1 10
"No. 1	0 85
Elastilite varnish, 1 gal. can, each	2 00
Granite floor finish, per gal	2 75
Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each.	
Sherwin-Williams' kopal varnish, assorted case, from	\$2.50.

GLUE.	
Common	
French medal	0 10
White, extra	0 18
Gelatin	0 12
Strip	0 18
Coopers	0 19
Huttner	0 20
Ground	0 12
Cologne, genuine	0 16

HARDWARE.

AMMUNITION.	
Cartridges.	
B. B. Caps Dominion, 50 and 5 and 25 per cent. American \$2.00 per 1000.	
C. B. Caps American, \$2.60 per 1000.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c. Central Fire, Military and Sporting, American, vdd 20 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, list net Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American	
10 per cent. advance on list.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount. American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

WADS.	
per lb.	
Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.	
Discount 20 per cent.	
ANVILS.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.	
Woodyatt Hudson, per doz., net	
Gilmour's, discount 65 and 5 per cent. off list.	4 50

AXES.	
Chopping Axes	
Single bit, per doz.	7 00
Double bit, " "	10 00
Bench Axes, 40 per cent.	18 00
Broad Axes, 25 per cent.	
Hunters' Axes	5 50
Boys' Axes	6 25
Splitting Axes	7 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.	
Red Ridge, boys', handled	
"hunters"	5 75
Underhill American Bench Axes, 40 p.c.	5 25

AXLE GREASE.	
Ordinary, per gross	
Best quality	6 00
	7 00
	10 00
	12 00

BELLS.	
Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	

Cow.	
American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.	
Gongs, Sargent's	
"Peterboro", discount 50 and 10 per cent. off new list.	5 50
American, each	8 00
	1 25
	3 00

House.	
American, per lb.	
	0 35
	0 40

BELLERS.	
Hand, per doz.	
Moulders, per doz.	3 35
Blacksmiths', discount 40 per cent.	4 75
	7 50
	10 00

BELTING.	
Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITS.	
Auger.	
Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings Gen., net list.	

Car.	
Gilmour's, 47½ per cent.	
Expansive.	
Clark's, 40 per cent.	

Gimlet.	
Clark's, per doz.	
Diamond, Shell, per doz.	0 65
Nail and Spike, per gross	1 00
"full sq. (\$2.40 list)	55
"Norway Iron (\$3 list)	55
Machine Bolts, all sizes, ½ and less	55
Machine Bolts, 7-16 and up	60
Plough Bolts	55
Blank Bolts	55
Bolt Ends	55
Sleigh Shoe Bolts	55
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

BLIND AND RED STAPLES.	
All sizes, per lb.	
	0 07½
	0 12

BOLTS AND NUTS	
Carriage Bolts, common (\$1 list)	
" 3-16 and ½"	60
" 5-16 and ½"	55
" 7-16 and up	55
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55
Blank Bolts	55
Bolt Ends	55
Sleigh Shoe Bolts	55
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

BOOT CALKS.	
Small and medium, all sizes, per M.	
Small heel	4 25
	4 50

BRIGHT WIRE GOODS.	
Discount 62½ per cent.	

BUTCHERS' CLEAVERS.	
German	
American	6 00
	12 00
	18 00

BUTCHER KNIVES.	
Bailey's	
	0 60
	6 30

BUILDING PAPER, ETC	
Tarred Felt, per 100 lb.	
Ready roofing, 2-ply, not under 45 lb. per roll	1 85
Ready roofing, 3-ply, not under 65 lb. per roll	0 90
Carpet Felt	1 15
Heavy Straw Sheathing	45 00
Dry Sheathing	35 00
Tar	400 "
Dry Fibre	400 "
Tarred Fibre	400 "
O. K. & I. X. L.	400 "
Resin-sized	400 "
Oiled Sheathing	400 "
Oiled	400 "
Roof Coating, in barrels	per gal.
Roof	small packages
Refined Tar	per barrel
Coal Tar	4 00
Coal Tar, less than barrels	per gal.
Roofing Pitch	per 100 lb.

BULL RINGS.	
Copper, \$2.00 for 2½-inch, and \$1.90 or 2-inch.	

BUTTS.	
Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 60 per cent.	

Wrought Steel.	
Fast Joint, discount 70 to 70 and 5 per cent.	
Loose Pin, discount 70 to 70 and 5 per cent.	

CARPET STRETCHERS.	
American	
Bullard's	1 00
	6 50

CASTORS.	
Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.	
Nos. 32 and 33	
	per gross
	7 50
	8 50

CHALK.	
Carpenter's Colored, per gross	
White lump	0 45
Red	0 65
Crayon	0 05
	0 14
	0 18

CHISELS.	
Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.	
Colonial Stock Foods, 50c. packages, per doz	
" " " 25c. pkgs.	2 00
" " " 10c.	75
" " " 25-lb. pall, each	1 30
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz.	1 25
Worm	1 25

FOODS—STOCK.	
Colonial Stock Foods, 50c. packages,	per doz \$4 00
" " " 25c. packages,	" " 2 00

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.		GAUGES.		Clothes line, No. 61..		Cabinet.	
Plain or Corrugated.		Marking, Mortise, Etc.		" 0 00 0 70		Eagle, discount 30 per cent.	
2-inch.....per 100 feet		Stanley's, discount 50 to 55 per cent.		" 0 60 12 00		PADLOCKS.	
3 "....." "		Wire Gauges.		Hat and coat.....per gro. 1 10 10 00		English and Am.....per doz. 0 50 6 00	
4 "....." "		Winn's, Nos. 26 to 33.....each 1 65 2 40		Chandelier.....per doz. 0 50 1 00		Eagle, discount 20 to 25 per cent.	
5 "....." "		GILLET'S POWDERED LYE.		Wrought hooks and staples Canadian discount 60 per cent.		MACHINE SCREWS.	
6 "....." "		1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.		Wire.		Iron and Brass.	
CRADLES, GRAIN.		HALTERS.		Hat and coat, discount 60 per cent.		Flat head, discount 25 per cent.	
Canadian, discount 20 to 25 per cent.		Rope, 1-inch.....per gross 9 00		Belt.....per 1,000 0 60		Round head, discount 20 per cent.	
CROSSCUT SAW HANDLES.		Rope, 1 to 3-inch....." 12 00		Screw, bright, discount 60 per cent.		MALLETS.	
S. & D., No. 3.....per pair 0 17 1/2		Rope, 1 to 3-inch....." 14 00		HORSE NAILS.		Tin Smith's.....per doz. 1 25 1 50	
S. & D., " 5....." 0 22 1/2		Leather, 1-inch.....per doz. 4 00		"P.B." Brand, 55 to 57 1/2 per cent.		Carpenters', hickory, " 1 25 3 75	
S. & D., " 6....." 0 15		Leather, 1 1/2 "....." 5 20		"C" brand, 40, 10 and 7 1/2 per cent. off list		Lignum Vitae....." 3 85 5 00	
Boynton pattern....." 0 20		Web....." 2 45		"M" brand, 55, per cent.		Caulking, each.....0 60 2 00	
DOOR SPRINGS.		HAMMERS.		"Monarch," 50 and 7 1/2 per cent.		MATTOCKS.	
Torrey's Rod.....per doz. 1 85		Nail.		"Peerless" 50 per cent. dis.		Canadian.....per doz. 5 50 6 00	
Coll. 8 to 11 in....." 0 95 1 65		Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27 1/2 per cent.		HORSESHOES.		MEAT CUTTERS.	
English....." 2 00 4 00		Tack.		Iron Shoes.		American, discount 3 1/2 per cent.	
DRAW KNIVES.		Sledge.		Snow shoes.....3 90 4 15		German, 15 per cen	
Coach and Wagon, discount 50 per cent.		Canadian.....per lb. 0 07 1/2 0 08 1/2		Steel Shoes.		Gem.....each.....1 15	
Carpenters' discount 60 and 10 per cent.		Ball Peen.		XL, sizes 1 to 5.....5 35		MILK CAN TRIMMING.	
DRILLS.		English and Canadian, per lb. 0 22 0 25		Light, No. 2 and larger.....3 80		Discount 25 per cent.	
Hand and Breast.		HANDLES.		No. 1 and smaller.....4 05		NAILS.	
Miller's Falls, per doz., net list.		Axe, 2nd growth, per doz. net 3 00 4 00		Featherweight, all sizes 0 to 4.....5 35		Cut.	
DRILL BITS.		Store door.....per doz. 1 00 1 50		Toeweight, all sizes 1 to 4.....6 60		Wire.	
Morse, discount 37 1/2 to 40 per cent.		Fork.		Add 25c. Toronto or Hamilton.		2d.....3 30 3 25	
Standard, discount 50 and 5 to 55 per cent.		C. & B., discount 40 per cent., revised list.		JAPANNED WARE.		3d.....2 95 2 90	
FAUCETS.		Hoe.		50 per cent.		4 and 5d.....2 70 2 65	
Common, cork-lined, discount 35 per cent.		C. & B., discount 40 per cent., revised list.		PICKS.		6 and 7d.....2 60 2 55	
EAVETROUGHS.		Saw.		Star.....per doz. 3 00 3 25		8 and 9d.....2 45 2 40	
10-inch.....per 100 ft. 10 00		Plane.		KETTLES.		10 and 12d.....2 40 2 35	
ELBOWS (stovepipe.)		Hammer and Hatchet.		Brass spun 7 1/2 per cent. discount off new list.		16 and 20d.....2 35 2 30	
5 and 6-inch, common.....per doz. 1 20		Canadian, discount 40 per cent.		Copper.....per lb. 0 30 0 50		30, 40, 50 and 60d (base).....2 30 2 25	
7-inch....." 1 35		HANGERS.		American, 60 and 10 to 65 and 5 per cent.		Cut nails in carlots 5c. less.	
Polished, 15c. per dozen extra.		doz. pairs.		Lock, Canadian dis. 40 to 40 and 10 per cent.		Steel cut nails 10c. extra.	
ESCUTCHEONS.		Steel barn door.....8 00 10 00		Cabinet, trunk and padlock.		Miscellaneous wire nails, discount 75 per cent.	
Discount 50 and 10 per cent., new list		Sterns, 4-inch.....4 50		American.....per gross.....0 60		Coopers' nails, discount 30 per cent.	
ESCUTCHEON PINS.		5-inch.....6 00		KEYS.		NAIL PULLERS.	
Iron, discount 40 per cent.		Zenith.....9 00		Door, japanned and N.P., per doz. 1 50 2 50		German and American.....1 75 2 50	
FACTORY MILK CANS.		Lane's covered—		Bronze, Berlin.....per doz. 2 75 3 25		NAIL SETS.	
Discount off revised list, 10 per cent.		No. 11, 5-foot run.....8 40		Bronze, Genuine.....6 00 9 00		Square, round and octagon, per gross.....3 38	
FILES AND RASPS.		No. 11 1/2, 10-foot run.....10 80		Shutter, porcelain, F. & L. screw.....1 30 2 00		Diamond.....1 00	
Great Western.....70 and 10 per cent.		No. 12, 10-foot run.....12 60		White door knobs.....per doz. 2 00		POULTRY NETTING.	
Arcade....." 10 "		No. 14, 15-foot run.....21 00		HAY KNIVES.		2-in. Mesh, 19 w.g., dis. 60 per cent.	
Kearney & Foot....." 10 "		Steel, covered.....4 00 11 00		Net prices.		2-in. Mesh, 16 w.g. and heavier, 50 p.c.	
Dixon's....." 10 "		" track, 1 x 3-16 in (100 ft).....3 75		LAMP WICKS.		OAKUM.	
American....." 10 "		" 1 1/2 x 3-16 in (100 ft).....4 75		Discount, 60 per cent.		U. S. Navy.....per 100 lb. 6 75	
J. Barton Smith....." 10 "		HARVEST TOOLS.		LADDERS, EXTENSION.		Plumbers....." 3 00	
McClellan....." 10 "		Discount 60 per cent.		Wagoner Extension Ladders, dis. 40 per cent.		OILERS.	
Eagle....." 10 "		HATCHETS.		LANTERNS.		McClary's Model galvanized oil can, with pump, 5 gallon, per dozen.....10 00	
Nicholson, 60 and 10 to 60, 10 and 5		Canadian, discount 40 to 42 1/2 per cent.		Cold Blast.....per doz. 7 00		Davidson oilers, discount 40 per cent.	
Royal.....80		Shingle, Red Ridge 1, per doz.....4 40		No. 3, "Wright's"....." 8 50		Zinc and tin, discount 50, 50 and 10 per cent.	
Globe.....70 to 75		2, ".....4 85		Ordinary, with O burner....." 4 00		Copper.....per doz. 1 25 3 50	
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.		Barrel, Underhill.....5 00		Dashboard, cold blast....." 9 00		Brass....." 1 50 3 50	
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Inches. 50 ft. 100 ft. 50 ft. 100 ft.		Spring, No. 20, per gro. pairs.....10 50		King, wood....." 2 75 2 90		PIECED WARE.	
Under 26.....3 80.....5 05		Spring, Woodyatt pattern, per gro. No. 5, \$17.50; No. 10, \$18; No. 20, \$10.80; No. 120, \$20; No. 51, \$10; No. 50, \$27.50.		King, glass....." 4 00 4 50		Discount 40 per cent off list, June, 1899.	
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71 to 80.....5 30.....9 38		Spring, Woodyatt pattern, per gro. No. 5, \$17.50; No. 10, \$18; No. 20, \$10.80; No. 120, \$20; No. 51, \$10; No. 50, \$27.50.		Daisy, 8 in....." 5 25 to 5 75		Per dozen.....6 00 9 00	
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				10 1/2-in. high wheel.....7 50 10 00		"....." 9 60	
				9-in....." 5 50 6 25		PLANES.	
				8-in....." 4 90 5 50		Wood bench, Canadian discount 40 per cent.	
				Discount 50 per cent.		American discount 50 per cent.	
				LOCKS.		Wood, fancy Canadian or America 37 1/2 to 40 per cent.	
				Canadian, 50 to 50 and 10 per cent.			
				Russell & Erwin.....per doz.			

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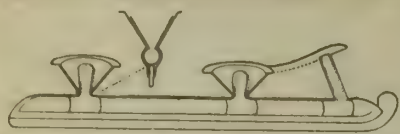
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37 1/2 to 40 per cent.		Hand, Diaston's, discount 12 1/2 per cent		Poultry netting staples, discount 40 per cent.		10 per cent.	
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Sorew	0 27 1 00	Solid	1 50 1 75	Turkey	0 15	No. 0-9 gauge	\$2 25
Awning	0 35 2 50	SASH CORD.		Arkansas	1 50	10	60 extra.
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Hindoo	10 50 14 00	Common doors, 2 or 3 panel, yellow and		Copper nails	52 1/2	No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,	
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per cent.		" F. H., bronze, dis. 75 per cent.		in bulk	15	Galvanized wire, per 100 lb.—Nos. 4 and 5,	
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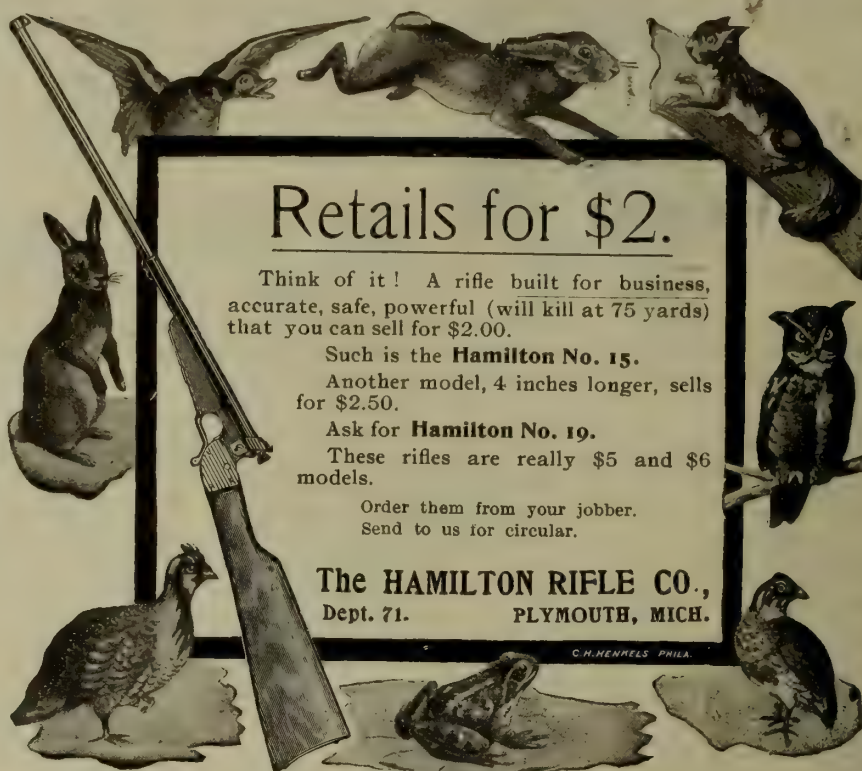
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Barnett Co., G. & H., Philadelphia, Pa.
Disston, Henry & Sons, Philadelphia, Pa.
Grose, Walter, Montreal.

Financial Institutions.

Bradstreet Co.
British America Assurance Co., Toronto.
Canadian Bank of Commerce, Toronto.
Confederation Life Ass., Toronto.
Liverpool & London & Globe Ins. Co., Toronto.
London Guarantee and Accident Ins. Co., Toronto.
Metropolitan Bank, Toronto.
Western Assurance Co., Toronto.

Firearms and Ammunition.

Hamilton Rifle Co., Plymouth, Mich.
Harrington & Richardson Arms Co., Worcester, Mass.
Iver Johnson's Arms and Cycle Works, Fitchburg, Mass.
Walter, E. F., & Co., Montreal.

Flat Irons.

Ives, H. R., Co., Montreal.

Food Choppers.

Enterprise Mfg. Co., Philadelphia, Pa.
Lamplough, F. W., & Co., Montreal.
Russell & Erwin Mfg. Co., New Britain, Conn.
Smith & Hemenway Co., New York.

Furnace Cement.

Sterne, G. F., & Son, Brantford, Ont.

Gas Lamps and Sundries.

Auer Light Co., Montreal.
International Gas Appliance Co., Toronto

Glaziers' Diamonds.

Sharratt & Newth, London, Eng.
Shaw, A., & Son, London, Eng.

Glue.

Grove Chemical Co., Lancashire, Eng.

Hardware Specialties.

Erie Specialty Co., Erie, Pa.

Horseshoe Pads.

Canadian Rubber Co., Montreal.

Horseshoes and Nails.

Canada Horse Nail Co., Montreal.

Ice Cutting Tools.

Erie Specialty Co., Erie, Pa.
North Bros. Mfg. Co., Philadelphia, Pa.

Injectors—Automatic.

Penberthy Injector Co., Windsor, Ont.

Iron Pipe.

Page-Hersey Iron and Tube Co., Guelph.

Iron Pumps.

McDougall, R., Co., Galt, Ont.

Keys.

Millen, John & Son, Montreal.

Ladders—Extension.

Waggoner Ladder Co., London, Ont.

Lanterns.

Ontario Lantern Co., Hamilton, Ont.
Wright, E. T., & Co., Hamilton.

Lawn Mowers.

Bowman, John, Hardware and Coal Co., London, Ont.
Maxwell, David, & Sons, St. Marys Ont.
Taylor-Forbes Co., Guelph, Ont.

Ledgers and Office Stationery.

Briggs Ledger System Co., Toronto.
Weese, G. A. & Son, Toronto.

Lumbermen's Supplies.

Birkett, Thos., & Son Co., Ottawa.

Lye.

Gillett, E. W., Co., Limited, Toronto.

Machinery.

Canada Foundry Co., Toronto.
Fairbanks Co., Montreal and Toronto.
Jardine, A. B., & Co., Hespeler, Ont.
Kerr Engine Co., Walkerville, Ont.
Morrow Machine Screw Co., Ingersoll, Ont.
Ontario Wind Engine and Pump Co., Toronto.
Penberthy Injector Co., Windsor.

Mantels.

Batty Store and Hardware Co., Toronto.

Manufacturers' Agents.

Gibb, Alexander, Montreal.

Metals.

Booth Copper Co., Toronto.
Canada Iron Furnace Co., Midland, Ont.
Canada Metal Co., Toronto.
Deseronto Iron Co., Deseronto, Ont.
Gibb, Alexander, Montreal.
Gilbertson, W., Pontardawe, Wales.
Hankin, F., Montreal.
Ironside, Son & Co., London, Eng.
Jackson, O. F., & Co., Vancouver, B.C.
Kemp Mfg. Co., Toronto.
Leslie, A. C., & Co., Montreal.
London Rolling Mills Co., London, Ont.
Lysaght, John, Bristol, Eng.
Morton, B. K., & Co., Sheffield, Eng.
Nova Scotia Steel and Coal Co., New Glasgow, N.S.
Samuel, Benjamin & Co., Toronto.
Thompson, B. & S. H., & Co., Montreal.

Metal Lath.

Metallic Roofing Co., Toronto.
Pedlar People, Oshawa, Ont.

Metal Polish, Emery Cloth, etc.

Anglo-Canadian Supply Co., Toronto.
Falkner, H. F., Toronto.
Oakley, John, & Sons, London, Eng.

Metallic Window Screens.

Cutts, C. M., & Co., Toronto Junction.

Milk Cans and Trimmings.

Davidson, Thos., Mfg. Co., Montreal.
Kemp Mfg. Co., Toronto.
McClary Mfg. Co., London, Ont.

Miniature Tools.

Davidson Mfg. Co., Brooklyn, N.Y.

Office Furniture.

Office Specialty Mfg. Co., Toronto.

Paints, Oils and Glass.

Berry Bros., Detroit and Walkerville.
Canada Paint Co., Montreal.
Canadian Oil Co., Toronto.
Consolidated Plate Glass Co., Toronto.
Dods, P. D., & Co., Montreal.
Dominion Linseed Oil Co., Montreal.
Imperial Varnish and Color Co., Toronto.
Janieson, R. C., & Co., Montreal.
Lucas, John, & Co., Philadelphia, Pa.
Luxfer Prism Co., Toronto.
McArthur, Cornelle & Co., Montreal.
McCaskill, Dougall & Co., Montreal.
Merrick, Anderson & Co., Winnipeg.
Nobles & Hoare, London, Eng.
Queen City Oil Co., Toronto.
Ramsay & Son, Montreal.
Sherwin-Williams Co., Montreal.
Standard Paint and Varnish Works, Windsor, Ont.
Thorne, R. E., Montreal.

Painters Tools and Supplies.

United Factories, Toronto.
Waggoner Ladder Co., London, Ont.

Patent Solicitor.

Cullen, Orlan Clyde, Washington, D.C.

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Greening, B. Wire Co., Hamilton.

Plumbers' Supplies.

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Jardine, A. B., & Co., Hespeler, Ont.
Millen, John, & Sons, Montreal.
Morrison, Jas., Brass Mfg. Co., Toronto.
Page-Hersey Iron & Tube Co., Guelph.
Standard Ideal Sanitary Co., Port Hope, Ont.

Portland Cement.

Hanover Portland Cement Co., Hanover, Ont.
Hyde, F., & Co., Montreal.
Thompson, B. & S. H., & Co., Montreal.

Poultry Netting.

Page Wire Fence Co., Walkerville, Ont.
Greening, B. Wire Co., Hamilton, Ont.

Refrigerators.

Davidson, Thos., Mfg. Co., Montreal.

Registers.

Ferrosteel Co., Bridgeburg, Ont., and Cleveland, Ohio.

Roofing Supplies.

Bird, J. A. & W., & Co., Boston.
Jenkin, A. C., Montreal.
McArthur, Alex., & Co., Montreal.
Metal Shingle & Siding Co., Preston, Ont.
Metallic Roofing Co., Toronto.
Ormsby, A. B., & Co., Toronto.
Paterson Mfg. Co., Toronto & Montreal.
Taylor-Forbes Co., Guelph, Ont.

Saws.

Diaston, Henry, & Sons, Philadelphia, Pa.

Scales.

Fairbanks Co., Montreal and Toronto.
Gurney Scale Co., Hamilton, Ont.
Merrick, Anderson & Co., Winnipeg.
New-Warren Scale Co., Montreal.

Screen Doors and Windows.

United Factories, Toronto.

Screws, Nuts, Bolts.

Acme Lathe Products Co., Manchester, Eng.
Canada Foundry Co., Toronto.
Morrow, John, Machine Screw Co., Ingersoll, Ont.

Sewer Pipes.

Canadian Sewer Pipe Co., Hamilton.
Hyde, F., & Co., Montreal.
McNally & Co., Montreal.

Shelf Boxes.

Bennett Mfg. Co., Pickering, Ont.

Shelf Brackets.

Atlas Mfg. Co., New Haven, Conn.

Ship Chandlery.

Lewis, Rice, & Son, Toronto.

Shovels.

Kohler, F. E., & Co., Canton, Ohio.

Silver-Plated Ware.

Ontario Silver Co., Niagara Falls.
Toronto Silver Plate Co., Toronto.
Standard Silver Co., Toronto.
Weeton, G. Mfg. Co., Toronto.

Sporting Goods.

Fisher, A. D., Toronto.
Lewis, Rice, & Son, Toronto.
Nott, W. G., & Co., Toronto.

Springs.

Wallace, Barnes Co., Bristol, Conn.

Stable Fixtures.

Greening, B. Wire Co., Hamilton, Ont.
Oneida Community Co., Niagara Falls, Ont.

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Superior Mfg. Co., Toronto.
Montreal Steel Works, Montreal.

Steel Castings.**Steel Rails.**

Algoma Steel Co.—Drummond, McCall & Co., Agents, Montreal.
Jackson, C. F., & Co., Vancouver, B.C.
Morton, B. K., & Co., Sheffield, Eng.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.

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Colonial Stock Food Co., Toronto.
International Stock Food Co., Toronto.

Store Lighting.

Auer Light Co., Montreal.
Grose, Walter, Montreal.
International Gas Appliance Co., Toronto.
St. Thomas Acetylene Mfg. Co., St. Thomas, Ont.

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Batty Store & Hardware Co., Toronto.
Canadian Heating & Ventilating Co., Owen Sound.
Davidson, Thos., Mfg. Co., Montreal.
Fairgrieve Mfg. Co., Toronto.
Guelph Foundry Co., Guelph.
Gurney Foundry Co., Toronto.
Kemp Mfg. Co., Toronto.
Ives, H. R., Co., Montreal.
McClary Mfg. Co., London.
Merrick, Anderson & Co., Winnipeg.
Sterne, G. F., & Son, Brantford, Ont.
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Western Foundry Co., Wingham.
Wright, E. T., & Co., Hamilton.

Toasters.

Fairgrieve Mfg. Co., Toronto.

Vises.

Lamplough, F. W., & Co., Montreal.

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Staunton's Limited, Toronto.

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Fairbanks Co., Montreal.

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Connor, J. H., & Son, Ottawa.

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Birkett, Thos., & Son Co., Ottawa.
Bowman, John, Hardware & Coal Co., London, Ont.
Canada Hardware Co., Montreal.
Howland, H. S. Sons & Co., Toronto.
Kennedy Hardware Co., Toronto.
Lewis Bros. & Co., Montreal.
Lewis, Rice, & Son, Toronto.
Merrick, Anderson & Co., Winnipeg.

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Canadian Steel Wire Fence Co., Hamilton.
American Steel and Wire Co., New York, Montreal, Chicago.
Dennis Wire and Iron Co., London, Ont.
Dominion Wire Mfg. Co., Montreal and Toronto.
Greening, B. Wire Co., Hamilton.
Ironside, Son & Co., London, Eng.
McGregor & Banwell Fence Co., Windsor, Ont.
Merrick, Anderson & Co., Winnipeg.
Oneida Community, Niagara Falls.
Ontario Wire Fencing Co., Picton, Ont.
Owen Sound Wire Fence Co., Owen Sound.
Page Wire Fence Co., Walkerville, Ont.
Walter, E. F., & Co., Montreal.
Western Wire & Nail Works, London, Ont.

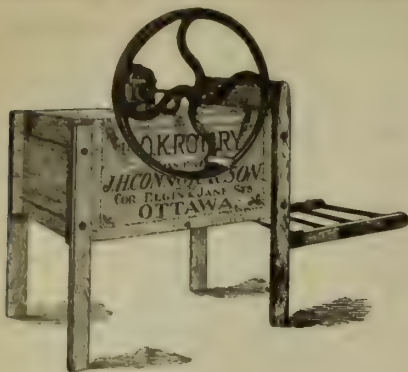
Woodenware.

Taylor-Forbes Co., Guelph, Ont.
United Factories, Toronto.
Waggoner Ladder Co., London, Ont.

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Canada Paper Co., Toronto.
McArthur, Alex., & Co., Montreal.

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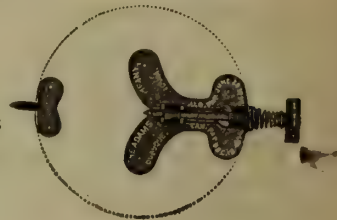


U. S. Patent June 25th, 1895.
Canadian Pat. Dec. 13th, 1894.

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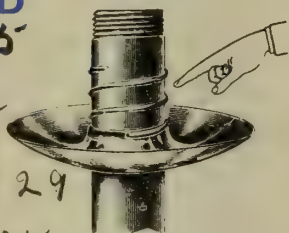
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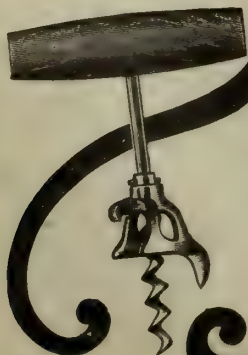
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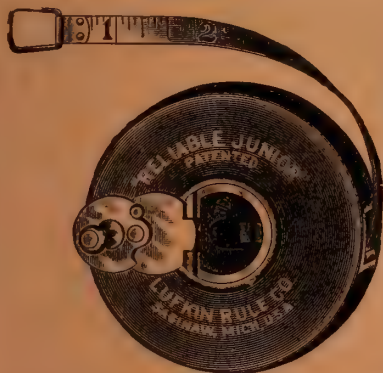


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A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
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VOL. XVI.

MONTREAL AND TORONTO, NOVEMBER 5 1904

NO, 45

HENRY BOKER

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LATEST DESIGNS

ARROW WINGED SHOE I & S. WORKS
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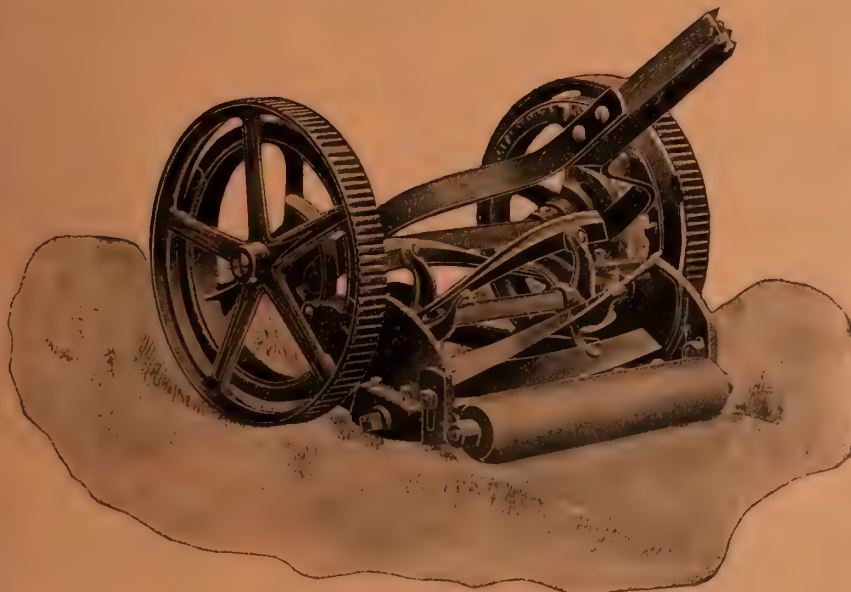


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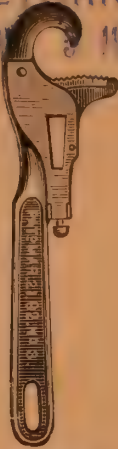
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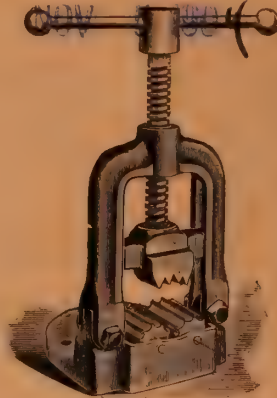
RETURNED
NOV 5 1904

Brass or
Iron
Stopcocks

RETURNED
NOV 5 1904

McNair
Pipe Wrench

No. 3 holds $\frac{1}{4}$ to $\frac{3}{4}$ pipe
" 4 " $\frac{3}{8}$ to 1 "
" 5 " $\frac{1}{2}$ to $1\frac{1}{4}$ "

RETURNED
NOV 5 1904

Pipe Vises

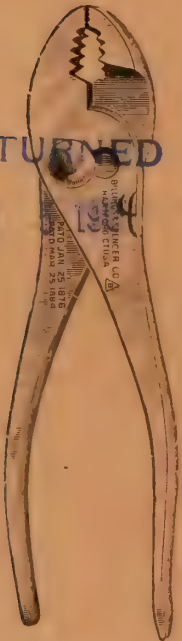
No. R holds $\frac{1}{4}$ to 2 pipe
" 8 " $\frac{1}{2}$ to 4 "
" T " 3 to 6 "

RETURNED
NOV 5 1904

Chain
Pipe Tongs

RETURNED
NOV 5 1904

Pipe
Stocks and Dies

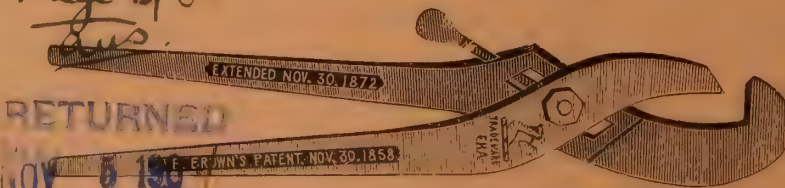
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NOV 5 1904

Gas Pliers



Alligator Pipe Wrenches

Put Both 26
Page 49
Sus.



Brown's Pipe Tongs

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Valves

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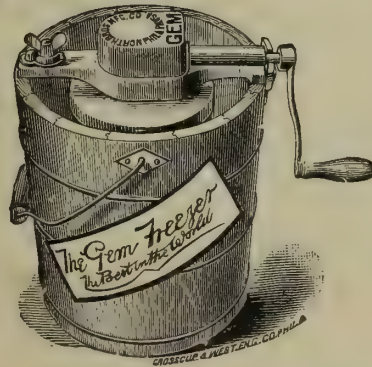
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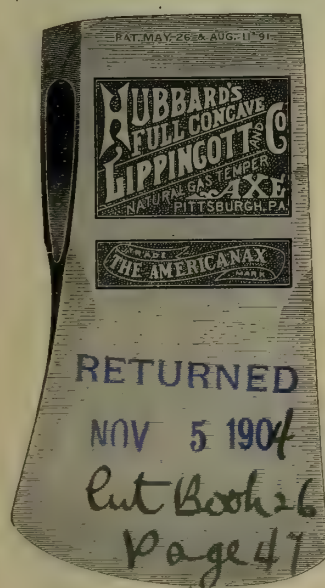
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3. Each Axe is carefully tested before leaving the factory.
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Head Office.

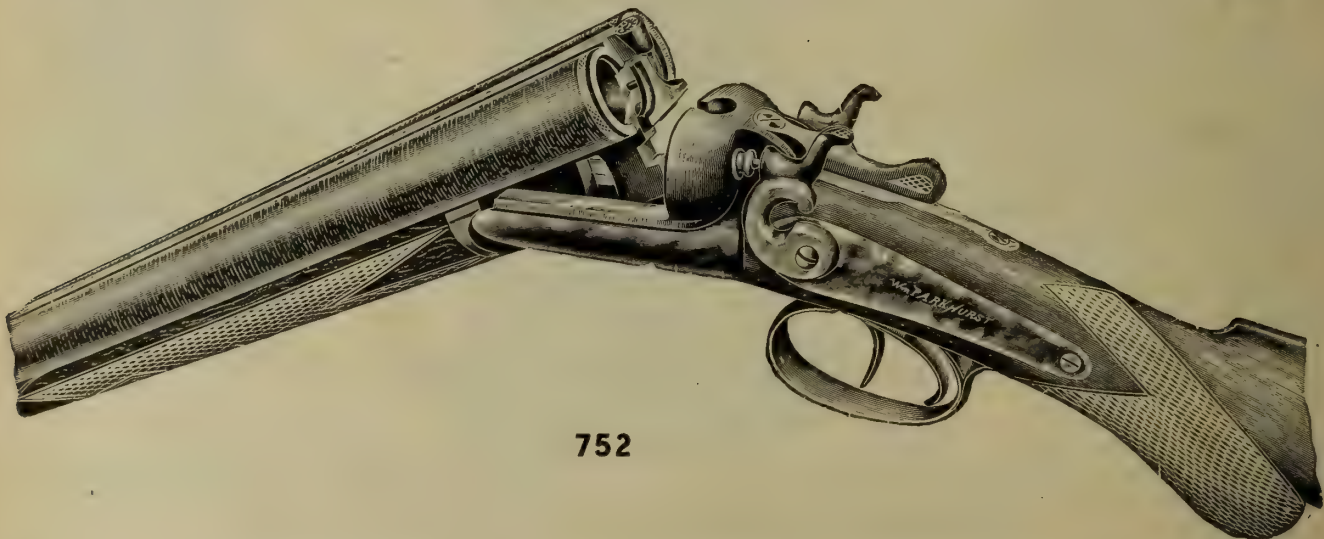
Importers and Distributors
M o n t r e a l
Toronto Vancouver Ottawa

Hunting For Snaps?

Stop ! Don't hunt any more. The snaps are right here. High quality Guns at prices that are sure to hit the mark. You would be surprised if you knew what we were selling them for. A post card will bring convincing prices.



756



752

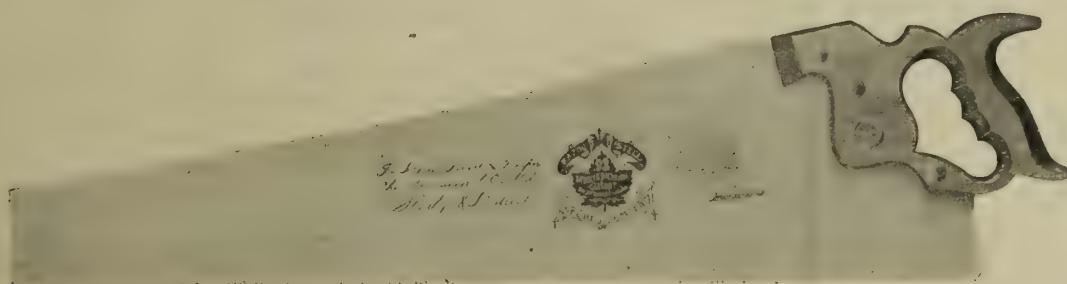
SPECIAL— A line of Hammerless Guns that we are clearing out at reduced prices.

John Bowman Hardware and Coal Company
LONDON, ————— CANADA.

Canada Leads the World

in the manufacture of

HIGH CLASS SAWS



No. 93

A New Design in a Hand Saw Handle, which is put on our Nos. 91, 92 and 93 Hand Saws and on our No. 22 Butcher and No. 40 Compass Saw.

Beech Handle, Blade Patent Finish.



No. 81

The Best and Cheapest Hand Saw on the market, Quality, Temper and Finish considered. Every Saw warranted.

Carved Applewood Handle, Patented Wave Finish Blade.

SHURLY & DIETRICH, - GALT, ONT.

Manufacturers of the celebrated

Maple Leaf, Razor Steel, Secret Temper Saws.

SILK PURSES OUT OF SOW'S EARS.

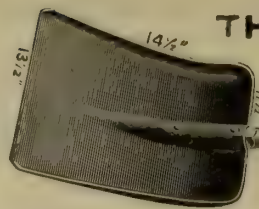
There's an old Scotch saying that "you canna mak a silk purse out of a soo's lug," which in other words, is to say, that unless you have the best material to start with, you cannot get the best results.

That is why we are so particular about the material we start with, in the manufacture of our "C" brand Horse Nails — the best Swedish charcoal, mild, toughened steel nail rods. We can buy lower priced material, and you nor we could not tell the difference in looking at, without testing the finished nails—but there is a difference—and a big one, in the greater wear you will get out of our "C" quality Horse Nails as compared with any other. While the lower cost to the manufacturer may be reckoned in dollars per ton, by using cheaper nail rods, to the farmer the economy in cost between a low-priced nail made from the latter does not amount to one cent on the nails used on a set of shoes, and is too small to be worth a moment's consideration, if he desires the very best.

We claim that there is no better material known or used in the manufacture of Horse Nails in the world, than we use for the "C" brand. That's a pretty big statement, and we invite any manufacturer in the world to disprove it! We shall be pleased to get a "straight tip" where anything better than we are using is to be procured.

Oh, no! "you can't make silk purses out of sow's ears," nor Horse Nails equal to the "C" brand except with the use of an equal quality and process. We have been making nothing else but Horse Nails for 39 years, and you have the benefit of that long experience in every box of nails bearing our name and trade mark. Send your orders to the wholesale dealer for "C" brand, and accept no other at the same price. There are none "just as good"

Canada Horse Nail Company
MONTREAL.



THE CYCLONE STEEL SHOVEL.

Handle 41 in.

For SNOW, STABLE USE, etc.

(Order by number.)

List.

No. 1341	Same as cut	86.00 doz.
No. 1342	41-inch handle with No. 2 top	6.50 "
No. 1343	41-inch handle with No. 3 top	7.50 "
No. 1327	27-inch handle with No. 3 top	7.50 "

Liberal
Discount
to the Trade.

Made from a sheet of 14 x 15 Steel, No. 16 gauge.

CARRIES EVERYTHING BEFORE IT. — Strong and light in weight. Shovel is fastened by two bolts and nuts, riveted. **SELL AT SIGHT.** It makes a splendid shovel for Street Cleaning.

Gentlemen:—Please ship at once two dozen of your Steel Snow Shovels same as we had a short time ago. These are the best shovels we have ever seen.

Yours truly,

Gentlemen:—Shovels just received. Very satisfactory. Please send via first freight ten dozen of the same kind.

Yours truly,

Write for our Circular of Shovels and Sidewalk Cleaners.

F. E. KOHLER & CO.,

CANTON, OHIO, U.S.A.

GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

Established 1815

ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.



Agents for Canada: **A. Ramsay & Son Company, Montreal**

GLAZIERS' DIAMONDS



Ahead of all others in quality and workmanship. If sparks of fine quality, set by experts, are what you require, buy Diamonds of A. Shaw & Son's make.

Canadian Agent

GODFREY S. PELTON

388 ST. PAUL ST., MONTREAL

CELEBRATED

HEINISCH

SHEARS

Tailors' Shears,
Trimmers' Shears,
Tinnern's Snips, etc.



ACKNOWLEDGED THE BEST.

R. HEINISCH'S SONS CO.

NEW YORK OFFICE, 155 Chambers St.
NEWARK, N.J., U.S.A.



SEYMOUR SHEARS

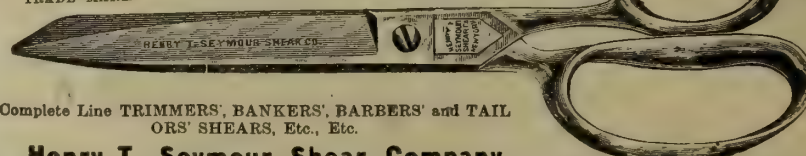
HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



Latest Catalogue will be sent in exchange for your business card.

Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.

ONEIDA COMMUNITY'S WELDLESS COW TIES.



Illustration shows the

NIAGARA WIRE
LINK
OPEN RING TYPE.

Also made in CLOSED RING, THREE CHAIN
and DOMINION (or "Short") TYPES

Oneida Community Cow Ties can be had of all
the leading jobbers. We invite correspondence
where any difficulty is experienced in obtaining
our goods.

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

NO DISHONESTY

in Gurney Scales. Every bit of
metal, every bit of wood that
enters into the construction of a

Gurney Scale

is tried and true. Our scales are
standard for design, for work-
manship, for durability and for
steady accuracy.

Never buy scales without first
investigating Gurney's.

SEND FOR CATALOGUE.

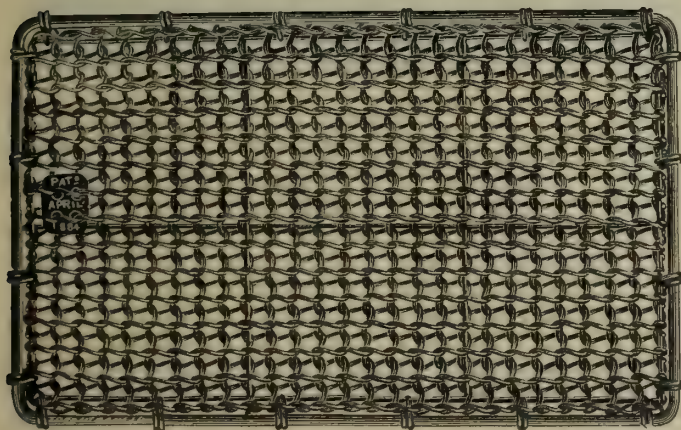
The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse :

Western Warehouse :

The Gurney-Massey Co., Limited The Gurney Stove and Range Co.
Montreal, Que. Winnipeg, Man. Limited,

Wire Door Mats



The most durable, cleanest and perfect
sanitary Mat made.

Has been on the market for 20 years.

All sizes and shapes made to order.

For stock sizes see catalogue.

THE B. GREENING WIRE CO.,
Hamilton, Ont. Montreal, Que. LIMITED

ANNEALED WIRE

FOR BALING

Hay, Straw, Pulp, Paper,
Excelsior, Rags, etc.

Steel Wire Hoops

For all Kinds of Barrels.

They are stronger, and when properly placed
and fastened by our Special Staple they are
more efficient than wooden hoops.

WRITE FOR SAMPLES AND PRICES

—TO THE—

DOMINION WIRE MFG. CO.
MONTREAL and TORONTO LIMITED



**"Pullman"
Lawn Sprinkler**

**IS YOUR
ORDER IN ?**

Send for Folder No. 14.

PULLMAN MFG. CO
Rochester, N.Y., U.S.A.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and
ELECTRO PLATE.**

Ask for our Catalogue and Quotations.

**NEWMAN'S PATENT
INVINCIBLE FLOOR SPRINGS**

Combine all the qualities desirable in a Door
Closer. They work silently and effectually, and
never get out of order. In use in many of the
public buildings throughout Great Britain and
the Colonies.

MADE SOLELY BY

W. NEWMAN & SONS, Birmingham.

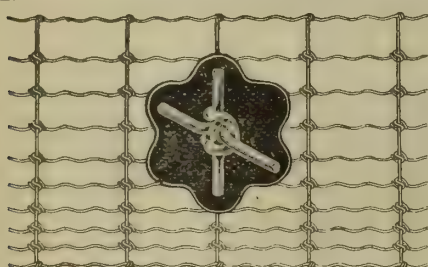
BRASS LABELS

to fit on tinware, stoves,
and what not. We make
them.

Shall we tell you the cost ?
Post card enquiry will do.

THE SUPERIOR MFG. CO.

58 Adelaide St. W., - TORONTO.



IDEAL FENCING

Is Strong and Durable, because Large Gauge (No. 9) Steel
Galvanized Wire is used throughout. SEE OUR EXHIBIT
AT PRINCIPAL FAIRS, or write for Catalog.

Write for Catalogue.

The McGregor-Banwell Fence Co., Limited,
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Merrick, Anderson & Co., Winnipeg, Man.
Sole agents for Man. and N.W.T.

A FULL LINE OF

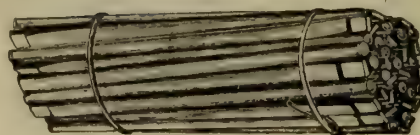
**Wire
Springs**

FOR THE

Carriage and Furniture Trade

JAS. STEELE, Guelph, Ont.

A SAMPLE ORDER SOLICITED.



**The Sarnia Hub, Spoke and
Bent Goods Mfg. Co.**

Sarnia, Ontario

We are prepared to fill any orders for

Heavy Wagon, Sleigh, Buggy, and Cutter Stock.

We make a specialty of heavy stock and can fill orders
promptly. Made from the best of oak and hickory as we carry a
large stock of lumber and can make any sizes that may be re-
quired. We make it a point to fill orders promptly.

If you are in need of anything in our line we will be pleased
to hear from you and we will give it our prompt attention.

J. S. LOUGHEAD & SON, - Sarnia, Ontario.

The dumping clause has no terrors for us. If Canadian prices on Hex and Square Caps and Square
Sets were not attractive, we should leave the Canadian market alone. You see we make these and similar
goods on our own "Patented" 4 Spindle Automatic Screw Machines. This spells cheap production
Then we draw our own material, and the price of material is away below what American Screw Manu-
facturers have to pay. Two fairly good reasons for attractive prices, are they not ?

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

Genuine Pratts Astral Lamp Oil

Sold in all countries and recognized as the highest grade oil manufactured.

WHOLESALE ONLY

THE QUEEN CITY OIL COMPANY, Limited, - TORONTO, ONT.

SPRINGS

FLAT.—SPIRAL OR VOLUTE

INTERESTING CATALOG MAILED ON APPLICATION

THE WALLACE BARNES CO.

BRISTOL CONN.

DILLON-HINGE-STAY

Why handle Barb and Coiled Wire at no profit when
you can have a fair margin on our

Dillon Fencing



Got up specially
for the hardware
trade.

Easily put up
and at the most mod-
erate prices.

Write for prices in car or small lots.

CAVERHILL, LEARMONT & CO.,
Montreal and Winnipeg
Eastern and Western Agents

OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.

When ordering

BEST MANILA
BRITISH MANILA
or
SISAL ROPE

be sure and insist upon the dealer supplying
our make.

Consumers Cordage
Co., Limited, Montreal

Then you will receive a satisfactory
article without any additional cost.

== NOW ==

IS THE TIME TO PLACE YOUR SORTING UP ORDERS
FOR

POCKET
KNIVES

T RUE BRAND



CUTLERY

RAZORS
SCISSORS

BEST GOODS QUALITY GUARANTEED RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., **Montreal**

PRICE is a good thing,—but,
QUALITY is better.

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.

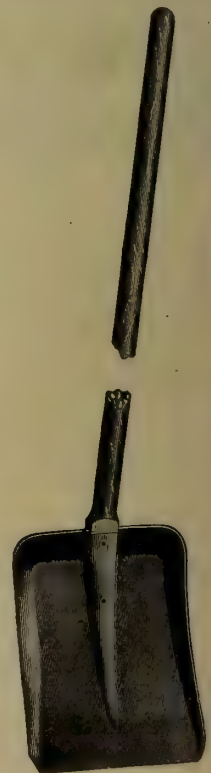
STEEL SNOW SHOVELS

**Strong and
Durable** YET LOW IN PRICE

Your stock will lack one of the best selling Shovels if
you do not have KEMP'S STEEL SNOW SHOVELS.

Finished in Japanned
or Galvanized.

KEMP MANUFACTURING CO., TORONTO, Canada



A MODERN HARDWARE STORE

By N. O. M.

TWENTY-SIX years ago Mr. Samuel Hobbs opened a hardware store at the corner of Queen street and West Lodge avenue, Toronto. His premises were then twenty by sixty feet. To-day, thanks to perseverance, attention to business and sound methods, he has built up a splendid trade in that section of the city, evidenced by the fine new store into which he has just entered. This new structure, which he has erected himself, for both business and residential purposes, forms a substantial block, in which are located two stores.

such possibilities as a favorite residential district, would no doubt be a profitable place for the commercial man. By building there along with the first citizens, by keeping his name before the public, and by developing his business along with the growth of population he has obtained an advantage over the merchants who came in later.

The store and dwelling are situated on the northwest corner of the street and are contained in a building of three storeys and basement. Mr. Hobbs' intention when building the store was to put up a residence for himself on a quieter and more secluded street, and he was merely adding the two storeys above the store for renting purposes. But as the building neared completion he found that he would have to be, as the saying is, "Johnny on the Spot," so

A second feature, worthy of notice is the system of oil tanks and pumps which has been installed by the S. F. Bowser Mfg. Co., manufacturers of self-measuring oil tanks and pumps. Mr. Hobbs has five of these pumps conveniently situated back of the stairway which leads to the basement of the building. In the basement are tanks connected with each pump, each having a capacity of one hundred gallons. In these five tanks Mr. Hobbs keeps turpentine, raw and boiled linseed oil and American and Canadian coal oil. He is highly satisfied with the class of work done by these oil tanks, and thinks that any merchant handling large quantities of oil would do well to place in his store a number of these tanks, as they save labor as well as oil.

Directly back of the pumps and on the



Store and dwelling of Samuel Hobbs, Toronto.

The corner one, with a floor space 80x25 feet, he has reserved for his hardware business. The adjoining one has been rented to a dry goods merchant.

The first thing a stranger naturally notices as he alights from a car at the corner is the admirable location which Mr. Hobbs has chosen for his business. Although 26 years ago the west end of Toronto was but sparsely settled, yet Mr. Hobbs had correctly foreseen that that portion of the city, which offered



Interior of Samuel Hobbs' store, Toronto.

he had the architect submit a second plan for the two upper storeys and instead of having the rooms built for renting he had them entirely changed into a modern and cosy dwelling.

On entering the store the first thing that attracts attention is the neatness with which everything is arranged. Long rows of shelves and vertical show-cases line each wall. As far as he can, Mr. Hobbs uses to advantage the Bennett Mfg. Co.'s patent shelf boxes, which are silent salesmen in themselves. That portion of the store taken up by the patent shelf box is sixteen feet long and from six to eight feet high, and here he displays all the smallwares pertaining to the hardware trade.

same side of the store is a row of shelves thirty feet long and reaching from floor to ceiling, and on which are displayed glass lamps, chimneys, and numerous kinds of tinware.

On the other side of the store at the front stands a handsome vertical showcase with purple background. In this is shown a splendid line of saws, planes, hatchets and hammers. Reaching along the wall from this showcase to the office is another long row of shelves, also reaching from floor to ceiling. On the upper shelves are displayed a great variety of paints, while on the lower in shelf-bins are kept all sizes of nails from the smallest wire to the largest spike,

making in all a good display for a hardware store.

Directly at the front of the store stands a showcase some twelve or fourteen feet in length, in which he displays a full line of pocket knives, razors and scissors. A second showcase in the rear of the store shows off to good advantage an attractive line of brushes. On Mr. Hobbs' shelves may also be seen one of the best lines of steel enameled ware, of which he is very proud. This is easily seen by the pleasure he takes in showing these goods.

Mr. Hobbs also handles stoves and ranges, and in his store one may find the lines of: The Owen Sound Stove Co., McClary Mfg. Co., Gurney-Tilden Co., and the Record Stove Co., of Moncton, New Brunswick. Mr. Hobbs told

ALUMINUM WARE.

ALUMINUM hollow ware possesses several distinct advantages which should commend it to the consideration of hardware merchants who are looking for a line to satisfy their best customers. It heats quickly, and food can be boiled to a dryness in vessels made of this metal. If, through carelessness, vegetables be allowed to become scorched, only the portion actually scorched will be spoiled; no burnt taste is imparted to the rest of the contents. Moreover, if an aluminum pan is allowed to remain on the fire until the whole contents are burned it is itself uninjured. The pan is as good as ever and only the contents are lost. Aluminum ware will not rust, and it is absolutely non-poisonous. Aluminum is a

Technical Book Reviews

Readers of **HARDWARE AND METAL** can secure any of the books referred to below at publishers' prices by writing to Book Department, **HARDWARE AND METAL**, Toronto.

The Building Trades Pocketbook. A handy manual of reference. By The International Correspondence Schools; illustrated; published by the Colliery Engineer Co., Scranton, Pa. Price \$3.50.

This handy little pocket volume is published for the special benefit of contractors and mechanics working in this line of business, or people taking any interest in structural design, masonry, bricklaying, carpentry, joinery, roofing, plastering, painting, plumbing, lighting, heating and ventilation. The book is handsomely bound in imitation morocco leather with gilt edged leaves. The paper used is coated, with a medium-sized clear type which is easily read. Inserted inside the back cover is a small folding note case, which would prove very handy as a receptacle for notes, etc. In addition to tables giving the properties of materials used in construction, practical rules for laying out work, and data valuable for reference, it presents approved methods for solving the problems involving strength and stability, which occur in building practice. Among the subjects considered are the loads on structure; the strength of materials; the bearing capacity of soils; the width and thickness of footing courses; the dimensions of piers and their foundations; the thickness of walls for different kinds of stone and brick masonry.

The chapters on plumbing, heating and ventilation contain tables, rules, formulae, recognized maxims, hints on the best modern practice and on the most approved apparatus and materials. This is a



Exhibit of The Canadian Aluminum Works at Toronto Exhibition.

Hardware and Metal that in three days he has handled between three hundred and seventy-five and four hundred stove pipes. This will give readers of this paper a faint idea of what Mr. Hobbs does for his customers in the line of stoves and ranges.

At the rear of the building a modern tinsmith workshop is to be found where Mr. Hobbs carries on with the help of five or six skilled mechanics and two apprentices work that has to be done in connection with the erection of stoves, besides furnace and eavetroughing work, for which he has a fair demand. In the rear of the store Mr. Hobbs has set aside for his own personal use and comfort a small office equipped with all the necessities with which to make business as much a pleasure as possible.

good conductor of heat, and it is only one third the weight of ordinary metals in common use for such purposes. But with all its advantages it retails at a good profit at a price no higher than that obtained for first-class granite ware.

These are all good talking points which will be appreciated by progressive merchants. The advantages of handling a high-grade line of goods with which the public are as yet not very familiar are obvious. The merchant who first undertakes to handle such goods gains a big advantage over his competitors.

The illustration shows the exhibit at the Toronto Fair of the Canadian Aluminum Works, 13 St. John St. Montreal. Further information may be obtained from them.

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

very interesting as well as an instructive volume.

• • •

The Mechanics' Pocket Memoranda. By the International Correspondence Schools; illustrated; published by the International Textbook Co., Scranton, Pa.; price \$3.00.

This volume is pocket size, bound in imitation morocco leather, with leaves of gilt edge. The paper is coated and the type and illustrations stand out clear and distinct. Inside of the back cover is inserted a small folding case, useful for depositing references and notes.

This handy volume contains information of particular value to those interested in mechanical engineering, steam engineering, electrical engineering, railroad engineering, hydraulic engineering, bridge engineering, civil engineering, etc. Tables and rules in connection with the many subjects already mentioned are inserted.

Among the subjects dealt with in this volume are: The metric system, tables of the specific gravity and specific heat of numerous substances, coefficients of expansion, pipe tables, steam tables, logarithms and tables; tables of circles, formulae, the method of extracting roots, mensuration, problems in ordinary mechanics, hydromechanics, strength of materials and boiler design, shafting, care of boilers, machine tools, the slide valve, pedestals, rope belting, pipe flanges, cylinders and steam chests, connecting rod, electric wiring, dynamos and motors and problems in connection with them, storage batteries and problems in connection, surveying and similar problems.

• • •

The Business Man's Pocketbook. By the International Correspondence Schools; illustrated; published by the International Textbook Co., Scranton, Pa.; price \$3.00.

In this pocket sized volume various subjects relating to a business man's life are treated in plain, concise language and in such a manner that the information can be readily put to profitable use. It has been published for the benefit of business men, office workers, bookkeepers, clerks, stenographers, etc., and thoroughly explains by illustrations, tables and rules such well known subjects as office work, bookkeeping, stenography, penmanship, etc. Inserted inside the back cover is a folding note and reference case, ever so handy to the user of the pocket book. In the book are a number of short talks to young men on

Watching the corners means success in paint selling. S. W. P. agents should watch the corners—get all they can out of their business—by selling a full line of

SHERWIN-WILLIAMS PAINT SPECIALTIES

SELL:—

S-W. FAMILY PAINT,

A handy paint for household use.

S-W. ENAMEL,

For interior decoration, tables, chairs, etc.

S-W. ALUMINUM PAINT,

For a silver finish on radiators, etc.

S-W. VARNISH STAIN—

Stains and varnishes in one operation, chairs, tables, etc.

S-W. FURNITURE POLISH,

For cleaning and polishing furniture.

S-W. STOVE PIPE ENAMEL,

For renewing old stove pipes. Prevents rust.

S-W. WAGON AND IMPLEMENT PAINT,

For painting farm implements and wagons.

S-W. EMPRESS GOLD PAINT AND IMPERIAL GOLD ENAMEL,

For general decorative purposes; gilding chairs, picture frames, etc.

S-W. BUGGY PAINT,

For painting buggies, porch and lawn furniture, etc.

They are *right* for the purpose. Send today for prices and full information.



THE SHERWIN-WILLIAMS Co.

PAINT AND VARNISH MAKERS.

Canadian Headquarters and Plant: 639 Centre Street, Montreal.

Warehouses: 86 York Street, Toronto; 147 Bannatyne Street, East, Winnipeg, Man.

1234

success, character, enterprise and education. This should certainly prove of considerable value as a handy reference book for all business men and boys who expect to be men of affairs at some time.

The contents of the book are as follows: Tables of measurements of all kinds; miscellaneous tables, mensuration of value to business men, the arithmetic requisite for the handling of money and accounts, business laws, systems of office work, tables of wages, legal and other abbreviations, postal information, annual salaries, passport regulations, duties on imports, standard time, bookkeeping, stenography, proof reading, banks, currency act, trusts, corporations, stocks, patents, copyrights, instruments law, statutes of limitation, and the science of success.

* * *

The Coal and Metal Miners' Pocketbook.

A pocket volume of principles, rules,

formulae and tables of value to mine officials, mining engineers and students in mining engineering; published by International Textbook Co., Scranton, Pa.; price \$3.

This is a volume containing a mine of information in the space of a pocket book. Everything that would be of value to those having anything to do with mining is touched on, and it should prove of great value as a reference book and also as a book of formulae and tables. An idea of the completeness of the work can be obtained from a review of the contents. They are as follows: Arithmetic and mensuration, geometry, plane trigonometry, surveying, including transit surveying, leveling, different surveying methods, notes on mapping, stadia measurements and railroad curves, elements of mechanics, including friction and lubrication, iron and steel beams, specific gravity, weight of castings,

wrought iron, wire ropes, hydrostatics, hydraulics, including the gauging of weirs, flow of water in channels, friction in pipes, drains, water power, pump machinery, fuels, including the classification of coals, properties of coals, analysis of coal, steam, boilers, including water and steam capacity, danger of explosion, prevention of scale, care of boilers, thickness of boiler iron, steam engines, compressed air, electricity, including electric wiring, calculation of wire, lamps, dynamos and motors, batteries, prospecting, including sampling and estimating available minerals and reports on mineral lands; opening a mine, including shaft sinking, mine timber and timbering; methods of working, including open work, closed work, longwall method, room and pillar methods, Connellsville method, Clearfield method, Alabama methods, Iowa methods, Tesla method, anthracite mining, flushing of culm; methods of mining mineral deposits, explosives, machine mining, ventilation of mines, in detail, hoisting and haulage, rolls, crushing mills, stamps, screens, theory of jigging, and table of natural sines, cosines tangents and cotangents.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Erie Specialty Co.

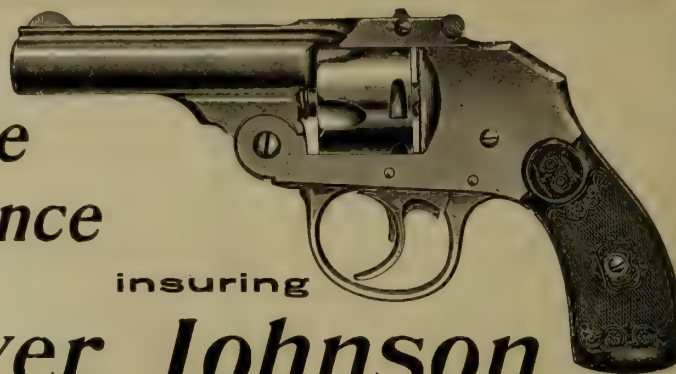
THE Erie Specialty Co., Erie, Pa., are sending out an October catalogue entitled "Sir Corkscrew's Soliloquy." The right hand pages of the catalogue are devoted to the illustrating and describing of the styles of corkscrews and bottle openers handled by them. On the left hand pages is run the poem, "Sir Corkscrew's Soliloquies." The poem is cleverly written, and is amusing. This is a neat little booklet, and should be in the possession of all hardware men handling this line of goods. Readers of **Hardware and Metal** may secure it upon applying to the Erie Specialty Co.

Winchester Repeating Arms Co.

The Winchester Repeating Arms Co., New Haven, Conn., have issued two of the most attractive lithographed hangers that have been sent out to the trade this season. One of them has for its central design a view showing a pair of duck hunters in a boat "bringing down" a brace of duck. In the foreground are shown three fine ducks in natural colors.

A Triple Alliance

insuring
Iver Johnson
supremacy



Genius

Quality

Enterprise

Mechanical Genius contrived the famous safety lever which makes it safe to hammer the hammer of an **IVER JOHNSON** Revolver.

Quality has always safeguarded the good name that **IVER JOHNSON** products have continuously enjoyed.

Enterprise has found channels for a wide distribution of **IVER JOHNSON** revolvers, guns, and bicycles. They are widely advertised, and leading merchants throughout the world sell them.

SEND FOR LITERATURE.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

The scene in the other shows a sturdy mountain hunter standing over his game, a good specimen of Rocky Mountain goat. Both of these calendars are true to life and would be an ornament to any store. Mention **Hardware and Metal** if you want one.

PEAT FUEL.

RECENT developments in the methods and apparatus for digging and treating peat have reduced the cost of preparing this fuel to a figure which makes it commercially advantageous in many localities to burn it in a boiler. Several plants have recently been erected in the vicinity of New York and successful trials have been made with peat containing as much as 50 per cent. of moisture. Its calorific power is about the same as that of an equal amount of wood and the ash is so small as to be very easily handled. It has been tried as a fuel in gas producers and because of the large amount of moisture present it produces a rich gas without the use of a jet of steam.

It has been found that compression by mechanical means takes out the moisture in a sufficient quantity to enable it to be dried quickly in the atmosphere, but

trials in boiler furnaces have shown that it is possible to at least burn peat which contained a large amount of moisture, although of course with no economy to speak of and in some cases with more or less difficulty.

It would seem that while peat is not to be classed with good coal as a fuel, its use in some localities would be advantageous.—Stoves & Hardware Reporter.

The city council of St. John, N.B., has had under consideration a proposal to buy out an electric light company in that city and operate the same. The company charges \$105 a light and the city is now operating a plant which lights part of the city at \$75 a light.

U. S. Consul Dudley, Vancouver, in reporting the establishment in that city of saw works by the A. J. Burton Saw Works, states that there are about two hundred saw mills in this province, the majority being shingle mills. About twenty are band-saw mills and the rest are mills that use circular saws with inserted teeth. There are no solid tooth circular-saw mills in this province.

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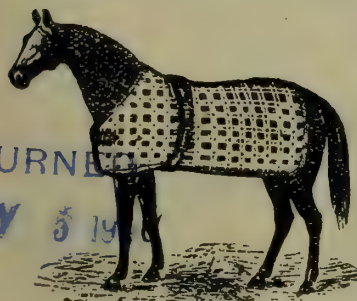
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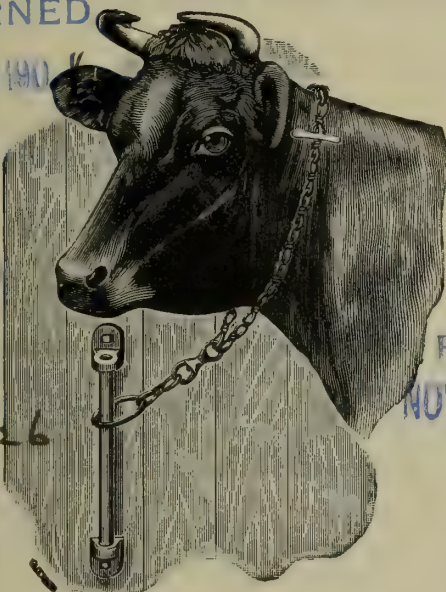


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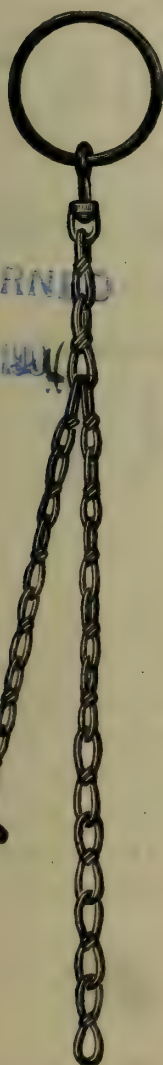


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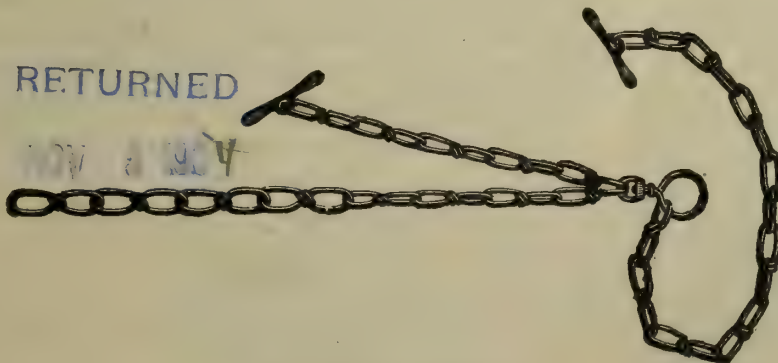
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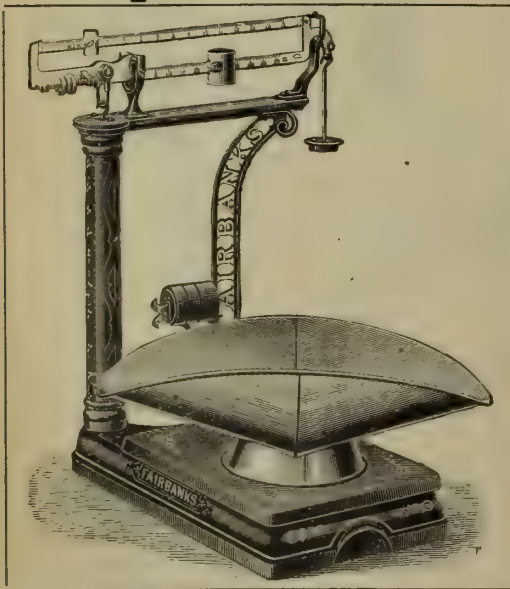
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Is a term that could be fittingly applied to the weighing methods of many merchants of to-day.

The fault in some cases is with the merchants. In most cases however the scale is to blame. Mr. Hardware Dealer, you should be particularly careful. If you are not you are robbing yourself. A Fairbanks Standard Scale is the best guard you can get. The one we illustrate here has been constructed to combine great convenience with a very handsome appearance. Weighs up to 250 lbs., and can be used with or without scoop. It is particularly adapted for hardware dealers.

Get a Fairbanks Scale "IT SERVES YOU RIGHT."

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MACHINERY

MACHINERY MARKETS.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, Nov. 3, 1904.

A DECIDEDLY off week has occurred in the machinery market and conditions heretofore prevailing have been discontinued for the present. Business, which has been fairly active, has experienced a sudden lull. No sales of any importance are reported and the supplies moving are of small amount. Travellers have returned from the Townships, saying that it was impossible to do any business, owing to the fact that this is election week and people are neglecting usual affairs to discuss the politics of the country.

Manufacturers are well stocked so that machinery shipments are vastly easier than a year ago. Last year was a phenomenal one, so much machinery being sold that it was impossible to have orders filled, unless placed months ahead. The preparation made to prevent a repetition of this, and a somewhat lessened demand, find the manufacturers of some lines with considerable stock on hand. A few machine tool orders are reported and some electrical machinery and supplies, but otherwise inactivity prevails.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East.

Toronto, Nov. 4, 1904.

CONDITIONS are very encouraging on the market this week. Local dealers have handled not a few orders and inquiries are coming in briskly. Engines and boilers seem still to be in the greatest demand, while wood-working machinery is also in good demand. Machine tools and iron-working machinery in general have not received the attention this week that they did last, although local dealers are after several orders.

Canada Machinery Co.

A new company has just been formed at Sarnia, Ont., known as the Canada Machinery Co., the principals of which are prominent business men in that town. The company has been organized to carry on the business hitherto conducted by G. A. Crosby & Co., Limited,

who have become involved within the last few months, as it is desired to have the enterprise continued in the town if at all possible. It is understood that the capital stock is to be \$100,000, and that \$140,000 bonds will be issued. As yet no definite arrangements have been made with the old company for a continuation of the business. Among the prominent names mentioned in connection with the enterprise are David Millan, of McKenzie, Millan & Co.; J. A. Littermaster, manager of the Lambton Loan Co.; Thos. Kenny, wholesale grocer, and T. H. Cook, private banker.

Allis-Chalmers-Bullock Prizes.

THE Allis-Chalmers-Bullock Co. have reason to feel proud of the showing made by them on their machinery exhibits at St. Louis. Their "Big Reliable" engine, which was the largest ever seen on exhibition, came in for a great deal of attention on the part of visitors and experts; and received from the jurors of awards a grand prize. Another grand prize was given for the Bullock electric generator, which being run by the big engine mentioned, furnished the spectacular decorative lighting for the grounds and buildings. Their exhibit in the Department of Mines and Metallurgy received another grand prize as well as did every department of steam engines, electricity and mining machinery exhibited. The Bullock system of operating variable speed electric motors was awarded a gold medal. It is a brilliant achievement on the part of this company, the result indicating in a striking manner the high quality of the goods manufactured by them.

Gas Engine Test.

J. de Clercy, mechanical engineer, of Montreal, is busily engaged installing gas engines and generators in different parts of the country. On one of these recently placed in the factory of Sylvestre & Frere, Clairvaux, a test has been made that shows satisfactory results. The first run made was of five hours duration, and the work done averaged thirty horse-power. The generator consumed only 183 pounds of coal during the time.

Machinery and Electrical Notes.

Glance Bay, C. B., has voted \$25,000 to improve its electric light service.

Among the orders received by the Levy, Weston & McLean Machinery Co., Toronto, are: An upright shingle machine for H. T. Mosine, Thetford; and a large duplex pump for the Menzie Wall Paper Co., Toronto.

Among the orders received by H. W. Petrie, Toronto, during the last week are: A Cincinnati grinder for the Henderson Roller Bearing Co., Limited, Toronto; a combination sandpapering machine for the Gendron Mfg. Co., Toronto; an automatic engine and Erie boiler for Jackson & Wells, Orangeville; and a soap plant, including a crusher, a melter and a chipper for the Purity Mfg. Co., Toronto.

A new direct current laboratory for electrical research has just been completed at McGill University, which takes up one-half of the storey in the Workman building, formerly used as a carpenter shop. This provides accommodation for a much larger body of students. This extension was made necessary owing to the large number now enrolled in the electrical department, which is the largest on record, and has increased each year for several years past.

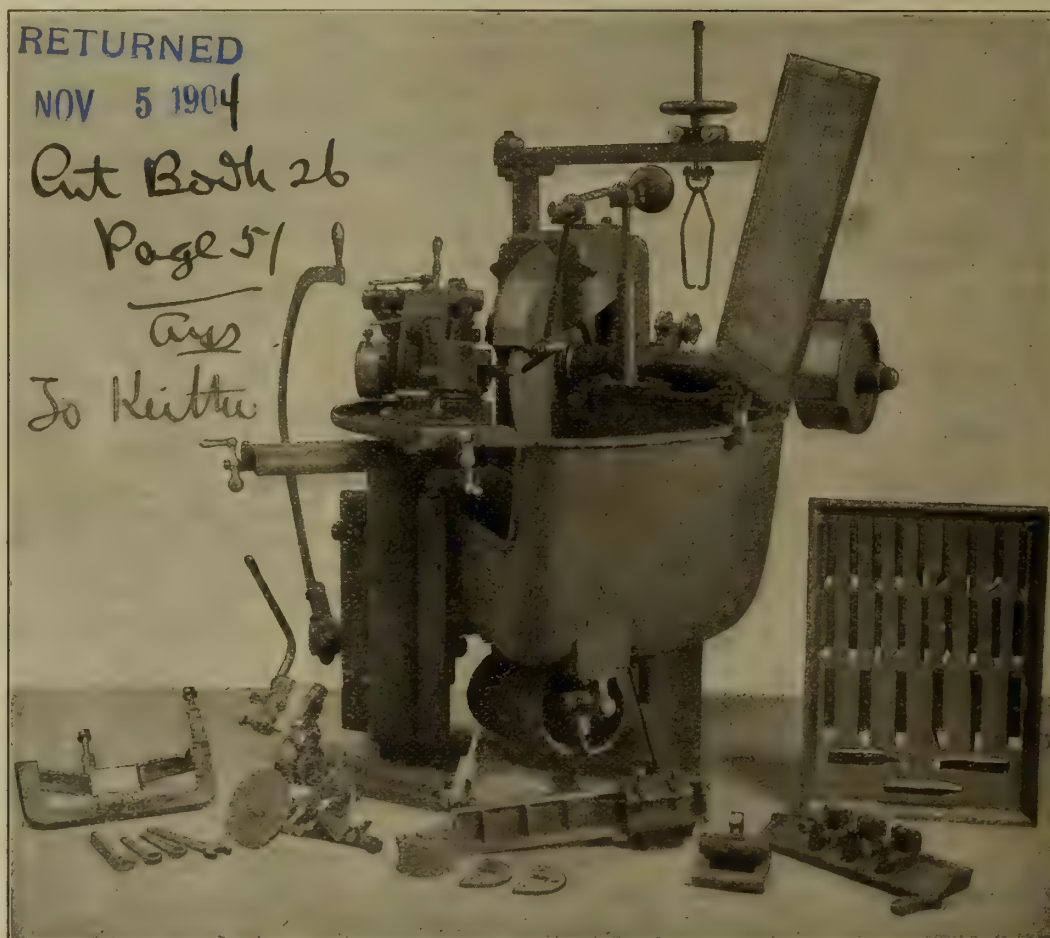
The Standard Construction Co., of Montreal, have been busily engaged within the past few weeks on a large number of electrical installations. They have just closed a contract with the convent of the Sisters of the Holy Name of Jesus and Mary for a complete equipment, including generators, motors, engines and boilers. The generator is to be a 60 k. w. direct current Canadian General Electric machine, to be assisted by a 15 k. w. marine set for lighting and night service. Two 75 h. p. boilers will supply steam for heating the building as well as for power. The motors are to be used in the laundry, and for elevators and ventilation purposes. This installation is similar to one recently placed by this company in the Hotel Dieu, and which has been found to answer every requirement for that institution. In addition to this they are putting in a complete conduit system for the convent of the Sisters of the Holy Cross at St. Laurent, to be followed later by a power plant. The latter institution are at present receiving power from the city mains.

UNIVERSAL TOOL GRINDING MACHINES.

THE system of having a separate department for the manufacture, care, inspection, maintenance, and storage of small tools, from which they are delivered to the users only on checks, which serve as receipts to identify the person at fault in case of their loss, breakage or misuse, has been of such pronounced benefit that it is almost universally adopted. Many years ago an

angles, so as to decide just what was the most efficient shape of tool for any definite operation upon any given material. When the desired forms were finally fixed upon there was designed and built a machine by which these forms could be quickly, reliably, and accurately ground by unskilled labor. This machine was placed in the tool department, and by it was produced a set

Although encountering at the start, some opposition from men who had pronounced ideas as to the most desirable shapes, which did not coincide with the standards adopted, the system soon proved a great benefit in every respect. While at the beginning it was necessary occasionally to fine a man who would return a tool showing evidence of his having reground it, now he could not be induced to waste the time required to do this. By the adoption of this system the daily



1.—Universal Tool Grinding and Shaping Machine

effort was started by William Sellers & Co., Philadelphia, to bring within this system the lathe and planer tools and everything in the shape of a cutting tool used on any of the machines in their works. This necessitated a thorough investigation of the shapes and merits of such tools as were at that time distributed among the various machines, and a long series of experiments to determine the best forms and cutting

of tools such as were believed would answer every requirement of the works. These tools were systematically arranged so that they could be treated with as much consideration as reamers or taps, and when all was ready every machine in the place was relieved of its stock of good bad or indifferent tools, thus unearthing tons of the best tool steel, much of which had been absolutely useless for years.

output of machine tools has been increased and the average quality of the work from them improved while at the same time the cost of the cutting tools has been reduced and the appearance and esprit of the shops improved.

The results of this experience are embodied in the patent tool-grinding machines illustrated, which have been designed to produce and to duplicate with mathematical accuracy the angles and

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"Maple Leaf" is made of the best cotton duck, woven to our special formula.

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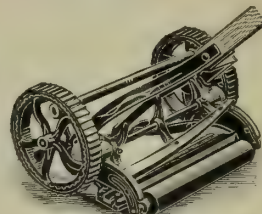
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High and Low Wheels, from 12 in. to 20 in. widths. Cold Rolled Steel Shafting, Crucible Steel Knives and Cutting Plate.

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In Four Different Sizes.

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

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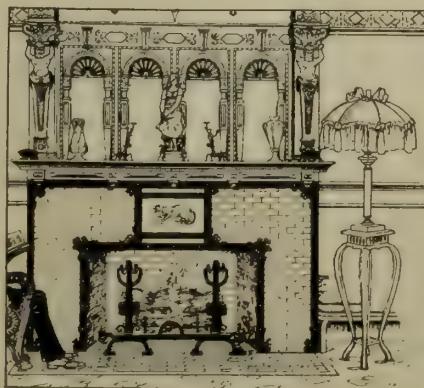
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CANADA FOUNDRY CO., Limited

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DISTRICT OFFICES,
MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
CALGARY, VANCOUVER, ROSSLAND.

shapes adopted as standards, or any others that may be desired, and to do this reliably and expeditiously by means of unskilled labor.

EFFICIENCY REQUIRED.

To efficiently grind steel tools by means of rapid cutting wheels, it is absolutely necessary that the contact be-

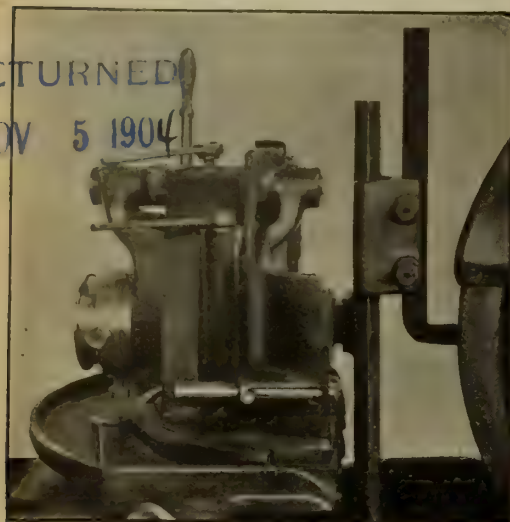
surface upon which it rests when in use, in order to avoid any errors due to want of parallelism of its sides, and to enable it to be re-ground with a minimum of loss. All of its plane faces should be ground without altering its position in the holder, to insure accuracy of the angles and uniformity in results. This requirement is particularly important in thread tools, for the grinding of which these machines are of the utmost benefit. Indeed, if they were capable of nothing else, this one feature of the accurate grinding of thread tools and the consequent maintenance of standards, would make their use profitable.

The tool holder should be capable of presenting the tool to the wheel in such a manner that any face can be so ground as to have a definite predetermined relation to the other faces and to the shank, and the adjustments necessary to accomplish this must be easily understood and quickly manipulated. It must be so mounted as to enable the tool face to be easily and quickly reciprocated past the line of cut of the wheel, and to be reliably fed against it and brought to any part of it. The cuts should be light, quick and frequent, to produce the best results in the shortest time.

SPECIAL FEATURES.

Experiments demonstrated that for roughing cuts a curved cutting edge is more efficient than a straight one, and that different materials and different depths of cut require different degrees of curvature; also, that the cut should be a draw out and not a gouging out, so that the bulk of the metal would be removed ahead of the point of the tool. This adds greatly to its life, the point being the most delicate part. The machines are supplied with holders to be used when grinding curved faces, and gauges for setting the tools in their holders so as to produce our standard shapes as given by the reference tables accompanying the machines, but means are provided for producing any other shapes that may be preferred. Means are also provided for grinding circular cutting edges with ease and accuracy, which is a great convenience in forming tools for planing and turning fillets and circular grooves.

For boring or chasing tools, which are usually bent at right angles to the shank, a special holder is furnished which when inserted in the regular holder enables such tools to be ground in the same manner as the outside turning tools. The advantage of being able to grind a chas-



2—Supplemental Chuck as used for the End Face of a Hook Tool.

tween the two should be a line and not a surface. Hence, if it is desired to grind a plane face of a tool, the wheel must have a cylindrical or conical surface, past which the surface to be ground must be moved in a plane. A



3—Supplemental Chuck as used for Truing up the Bottom of Tools.

plane face of the wheel cannot be used for this purpose, because it and the surface being ground would soon coincide, with the results of no cutting and much heating. The tool should be clamped in the holder against its base, or the

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
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MACHINERY WANTED.

Items under this heading inserted free for readers of **HARDWARE AND METAL**.

ELECTRIC LIGHT MOTOR WANTED—Incandescent; about 50 lights. Address E. Smith Basket and Veneer Co., Leamington, Ont.

SMOKESTACK WANTED—40 or 50 feet of 24 inch stack; new or second-hand; in first-class condition; also small lath machine. Box 80, Providence Bay, Ont.

TRIPLE EXPANSION ENGINE—Having high pressure; about 4 x 6; state full particulars. H. C. Minett, Minett P.O.

WANTED—Second-hand Gasoline Engine. 15 h.p., with 3½ in. pulley. Must be in good repair and cheap. James Leach, Eden, Ont.

WANTED—Second-hand 25 h.p. firebox boiler; must be first-class. Address Box 308, Petrolea, Ont.

WANTED—10 h.p. Motor of 110 volts. State how long in use and lowest price. Address P.O. Box 378, Winnipeg.

WANTED—To purchase at once for cash, small second-hand Gasoline Engine, 4 h.p., full outfit. Apply R. Gillespie, Norwood, Ont.

WANTED—Good second hand pair tinner's squaring shears, either 24 or 30 in. cut, state make, how long in use, condition and price. Bennett & Son, Gananoque.

WANTED—Second-hand Plate Chopper. Pulleys and Shafting to connect. Lock Box 22, Burford.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, **HARDWARE AND METAL**, Montreal.

ENGINE FOR SALE—20 h.p.; stationary, side crank. Price \$80. Address Box 41, **HARDWARE AND METAL**, Montreal.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.



Hardware Men.

We can supply you with "Hustler" Motor like cut for \$1.10. It's great seller. All other sizes kept in stock. We have **everything** electrical. Send for our No. 20 novelty and other catalogues.

The **Sayer Electric Co'y,** 10-14 Beaver Hall Hill MONTREAL.

ing tools which will make a female thread having absolutely the same shape and angles as its male mate which has been produced by a tool ground in the same manner, needs no comment. The only shapes of cutting edges which cannot be ground on these machines are concave curves and re-entrant angles less than ninety degrees.

A rotary pump forces water to the tool being ground through a system of jointed pipes, ending in an adjustable nozzle. This furnishes a large volume of water at low velocity, which can be regulated in amount and directed at will, thus enabling it to be applied in manner and quantity to suit the various conditions, and avoid the necessity of applying it to the wheel at some distance above the tool, whereby it would attain the velocity of the wheel on reaching the tool and cause an inadmissible amount of splashing. The function of the water is to carry off the heat generated by the grinding and this arrangement accomplishes this in the most effectual manner and with the least splashing. The use of such a large quantity of water demands that all working parts should be protected from it on account of the grit carried along with it. This has been effectually done.

DESCRIPTION.

The No. 1 machine illustrated will do all work after forging to finish to shape tools whose shanks are not over two degrees by two and a half degrees. The wheel has two conical grinding surfaces forming a V, with 90 degrees including angle, for convenience in grinding the different faces of tools, for increasing the available grinding surface, and to enable small and delicate splining tools to be ground. The tool chuck can be rotated about a horizontal axis parallel with the shank of the tool and can be readily set at any angle by means of a graduated circle and vernier feeding to 1-10 degree. It is carried in a frame which can be rotated about a vertical

axis passing near the point of that tool and can be set to 1-10 degree. The frame is carried by two slide rests at right angles to each other and moving parallel to the tangent planes of the two grinding surfaces. The slide rests, frame and chuck are all carried by a vertical slide having a long square bearing accurately fitted, and the weight of the moving parts is counterbalanced by a spiral spring so that, although massive and rigid it can be reciprocated vertically with surprising ease. The chuck for grinding curved surfaces is inserted in the regular tool chuck and a frame carrying a gauge and a roller against which the former plates work is put in place in about half a minute. Means are provided by which a tool filed or ground to any desired curved shape can be used as a guide or templet from which a former plate can be ground in the machine and afterwards used to exactly reproduce the tool or a curve parallel to it. A chuck is provided for grinding the side or base of a tool shank. Also a chuck by which a tool bent at a right angle can be ground the same as a straight tool without changing its position in the chuck. The V-shape of the wheels permits the use of a chuck for grinding delicate splining tools.

Machinists Amalgamate.

Heretofore machinists of Montreal have had two separate and distinct unions, but they have resolved to amalgamate and to form in the future but one body for the purpose of greater strength and harmony, and to render them more able to work together to further the interests of machinists generally. They have not yet chosen a name for the new union, but this is to be accomplished at a joint meeting to be held at an early date. At this meeting the officers will also be elected and a strong organization of machinists is assured in Montreal.

CARE OF STORAGE BATTERIES.

By John Howatt, in Power.

FOR several years the storage battery has been a necessary accessory to certain classes of central stations. Its ability to instantaneously respond to any sudden increase of load makes it especially applicable for use in connection with central stations where the load fluctuation is sudden.

Yet there are a good many engineers and operators of plants who are not in favor of a storage battery system. They claim what is too often true, that the battery part of a plant gives more trouble and requires more repair and attention than all the rest of the plant. There is in many cases a great deal more trouble than there would be were the battery properly installed and taken care of. In many plants all the operator knows about the care of a battery is to stop charging when the cells gas freely, and to keep the electrolyte high enough in the tank to cover the plates. But this is not enough to keep a battery in good condition, and a battery which is not in good condition is truly a source of much trouble.

The rates of charge and discharge are two very important things to look after. They are perhaps the cause of over half the troubles arising in a battery plant. In charging a certain rate of charge is normal to a certain cell, depending on its rating. It is usual to consider a cell as being charged at the normal rate when it requires eight hours to complete it. Thus the normal charging current for any cell can easily be determined. If a cell is rated as a 2,000-ampere-hour cell, the normal charging current will be 250 amperes. In usual practice this will correspond to about 2 amperes per square foot of surface of the positive plate. The eight-hour rate should not be exceeded any more than can be avoided. If the charge must be hurried, the increased rate should come at an early stage of the charge, being cut down to a normal rate before the battery begins to gas much. Even at the beginning, the rate should never exceed the normal by more than 25 per cent.

While it is very injurious to repeated-

ly charge a battery too rapidly, it is also injurious to charge it too slowly. A thirty-hour rate should always be considered a minimum.

The point at which to cease charging is often the cause of considerable trouble to the operator and is a very important matter with regard to the life of the battery. There are four well-known ways by which it may be determined when a cell is fully charged. They are: the hydrometer test showing the specific gravity of the electrolyte; the voltage; gassing, and the color of the plates. The two latter, however, are not very sure indications, although when a cell is in proper working order, gas should be given off when it is fully charged, and the positive plate should be a rich brown while the negative plate should be gray. The specific gravity test and the voltage test are the ones that should be ordinarily used.

INQUIRIES AND ANSWERS.

A gentleman in Birmingham, England, conversant with the hardware and wood-ware trades, is desirous of representing in that city Canadian manufacturers of those lines. Communications can be forwarded through the editor of Hardware and Metal.

BUSINESS CHANGES.

ONTARIO.

ROBERT DAWSON, carriagemaker, Aylmer, has assigned to J. E. McDonald; meeting of creditors to be held on the 7th inst.

Andrew Clark, brass foundry, Merriton, is dead.

Thomas Fullerton, hardware dealer, Drayton, is removing to Moncton.

The Wire Woven Wood Mfg. Co., Toronto, have removed to Woodbridge.

T. H. & A. H. Dryden, machinists, Toronto, have been burned out; no insurance.

T. Fox, Woodbridge, has sold his foundry to the Wire Woven Wood Mfg. Co.

The assets of John Bowman Hardware & Coal Co., London, have been sold to W. Bowman at 70c on the dollar.

Cornelius Shields, general manager the Lake Superior Corporation, manufacturers steel, etc., Sault Ste. Marie, is dead.

QUEBEC.

The Canadian Electric Co., Montreal, have assigned to Wilks & Michaud.

The business of (estate of) Moses Parker, foundry, Montreal, is offered for sale.

Bilodeau & Chalifoux are curators for Joseph Desforges & Co., wholesale and retail hardware dealers, Montreal. Assets to be sold on the 8th inst.

MANITOBA AND N.W.T.

Booth & Edwards, hardware merchants, Sedley, have dissolved partnership; J. Booth retires and S. H. Edwards has been admitted.

BRITISH COLUMBIA.

Application has been made by the Cranbrook Sash & Door Co., Limited, Cranbrook, to change name to Kimberley Milling & Mfg. Co., Limited.

POWERFUL LANTERN.

E. T. Wright & Co. are pushing the sale of their celebrated searchlight lantern, just the thing that is wanted where a strong light is required to be spread over a large surface, as in livery stables, barns, saw and planing mills, warehouses, packing houses, work shops, picnic grounds, lawns, Summer resorts, etc. The lamp throws a brilliant and steady light, and will burn as well out of doors as inside, without smoking or flickering, and is not affected by wind or strong drafts.

CHOOSE YE

There are to our knowledge upwards of a half dozen Stock Foods sold in Canada. Their merit varies. There is one however whose goodness is never disputed that is really the standard. It is

INTERNATIONAL STOCK FOOD

Our plans to assist our agents are the most liberal ever known—too liberal some say. But the dealers want a line that sells quick. No dealer has to complain about **International Stock Food** being a "sticker."

Why don't you find out our plans to help you?

FREE FOR A POST CARD.

INTERNATIONAL STOCK FOOD CO., TORONTO.

Fed on Colonial Stock Food.

Hardware Dealers

Get our prices on

Colonial Stock Food

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WEIGHTS AND MEASURES.

FURTHER attention has recently been called to the question of weights and measures within the Empire by the passing, in its second reading, by the House of Lords of a bill compelling the adoption of the metric system within the United Kingdom after April 1, 1906. This bill has had the energetic support of Lord Kelvin, one of the foremost scientists and philosophers of the day. At the last congress of the British Colonies it was recommended that the system be adopted throughout the Empire, and the Ministers of the Colonies were strongly urged to advocate such a policy. That the bill does not become law without vigorous protests is shown by the fact that a British Weights and Measures Association has been formed recently in England to combat the metric system. In Canada this system is favored throughout and its adoption advocated by the Manufacturers' Association and the different boards of trade in the country. The initiative having been

taken by the Mother Country, in all probability it will lead to its being followed by the Colonies without exception, so that it is only a question of time until the metric system will have been universally adopted in Greater Britain.

GLASS SCARCITY MORE APPARENT.

WHEN it was first intimated that the glass situation in Belgium had reached a climax, and that the majority of the factories there had closed down, it was not taken as seriously in this country as later developments would warrant. It was generally believed that while factories were suspending operations their stocks were far enough ahead to overcome any shortage whatever. The fallacy of this is now apparent and hardware dealers throughout Canada, who have not already laid in their stock of glass, are running every risk of being without. The advance of 25c a box three weeks ago will in all likelihood be followed by another of similar amount within the coming week. As a criterion of the situation, and to show the scarcity existing, it might be noted that one large jobber in Montreal stated that whereas the usual stock in their warehouse at this season of the year was ten thousand boxes, there were less than five hundred there at present, and although they had some on board steamer inward bound, it was not known whether it was for stock or for orders already placed. The present situation is almost without parallel in the Canadian glass trade, at least a similar situation has not been experienced for a great many years.

IRON AND STEEL OUTLOOK BRIGHT.

THE recent advances made in pig iron give every indication of a turn in the tide. Authorities on the situation state that the period of depression in the iron and steel market of Canada has passed; and the present outlook indicates that the Canadian plants will have all they can do for some time to supply the home market. There is a buoyant and hopeful feeling that was never before experienced in the history of metal industries in this country. Canada has not often had a depression

in the metal market as keenly felt as the one through which she has just passed, and with the turn that affairs have now taken, the outlook was probably never brighter.

Speaking of the situation to a representative of Hardware and Metal, J. T. McCall, of Drummond, McCall & Co., Montreal, said the advances have been due to a natural reaction after the depression in the United States. The railroads and large manufacturing companies in this country have been holding back and buying as little as possible, keeping their requirements to the lowest notch. This has caused a depression in price away below the normal and natural figures. Recently the railroad companies have commenced buying in large quantities, which has precipitated matters to such an extent that nearly all the large corporations are anxious to place their orders. The natural result is the steadying of the market, an increase in prices, and a turn of affairs indicating a continued strong market, that augurs well for the iron and steel industry in Canada.

A RIDICULOUS LICENSE BY-LAW.

THE attitude of some municipalities toward licenses reminds one of the advice of an Irishman to a friend at the Donnybrook fair, "Whenever you see a head, hit it." The municipalities ever alert for some new means of raising revenue without increasing the general tax rate, seem to consider the license a most effective weapon. The principle seems to be, "Whenever you see an industry, license it."

Montreal, next to the Ontario Government, has distinguished itself for ingenuity in this direction. One of its recent productions, a by-law to license (a) all wood-working factories, lumber and hay yards, etc., (b) all motors, operated by any power, has caused widespread hostility, which has aroused the vigorous antagonism of the Montreal branch of the Canadian Manufacturers' Association.

The pretext for the by-law is that the danger of fires in lumber and hay yards,

wood working plants, etc., and from motors of all kinds is so great that regular inspection is necessary and that a special tax should be levied to defray the cost of this inspection.

The Manufacturers' Association objected to the licensing of lumber and hay yards, wood-working plants, etc., on the ground that Montreal already has the power of regulating and inspecting such yards and works and because the clause of the by-law was so ambiguously worded that it included every factory that used a gallon of varnish, oil, gasoline or benzine in the process of manufacture.

The objection to the license on motors was partly based on the knowledge that motors are not dangerous. The evidence of such authorities as J. M. Walbank, of the Montreal Light, Heat and Power Co., Mr. Baynes, of the Canadian Westinghouse Co., Mr. Shaw, of the Montreal Co., was presented, while the point that insurance companies do not regard motors as additional hazards was emphasized. Moreover it was insisted, to put a license of \$5 on each motor was unfair and unjust inasmuch as in some places individual motors are used in some works where a similar work is done by one motor in other premises.

A meeting between representatives of the Manufacturers' Association and the committee on legislation of the Montreal City Council was held some time ago at which these objections were earnestly expressed. "The mountain labored and brought forth a mouse." The Montreal Council agreed that, instead of amending their ridiculous by-law, they would give instructions that it should not be literally enforced, that instead of charging a license of \$5 on "each motor" as stated in the by-law, a license of that amount should be levied on "each establishment" using motors.

Naturally the Manufacturers' Association were far from satisfied. On Monday another meeting was held by the association at which a second protest was prepared and forwarded to the civic committee of the council, in which the action of the council in asking the manufacturers to pay a license fee in a modified form was declared to be decidedly irregular and the repeal of the by-law in toto was urged.

Justice and commonsense should lead the Montreal council to comply with the demand of the manufacturers.

MEETING OF IRON AND STEEL INSTITUTE.

AN all important event in the iron and steel circles of America in 1904 is the American meeting of the Iron and Steel Institute. This is the second time that this institute has met in America, the former occasion being in 1890. The Iron and Steel Institute was founded in 1869, with the object in view of affording a means of communication between the members of the iron and steel trade. The idea originated with the iron manufacturers of the United Kingdom. The Duke of Devonshire, K. G., was the first president of the institute. Two general meetings of the institute are generally held each year, one of which is held in London, Eng., in May, and the other in the Autumn in different localities, the place being settled by the council each year.

The membership is chiefly in Great Britain, but there are members in all the iron and steel producing countries in the world. Out of about 1,900 members, 424 are from countries outside Great Britain.

The American meeting commenced on October 24, and will last until November 12. From October 24 to October 27, sessions were held in New York. On October 27 the members left New York for Philadelphia, some of them going by way of Bethlehem, where the plant of the Bethlehem Steel Co. was inspected. From Philadelphia they proceeded to Washington, and from thence to Pittsburgh and Cleveland. On November 5 the party will leave for Buffalo, and Sunday and Monday will be spent at Niagara Falls and vicinity. On Tuesday they will leave for New York. The party going to the World's Fair at St. Louis, left Pittsburgh on November 3 for St. Louis, where they will spend Saturday and Sunday, returning to New York by way of Chicago, Niagara Falls and Buffalo.

THE OPENING SESSION.

The opening session of the institute was held in New York on Tuesday evening, November 1. Addresses of welcome were delivered by Chas. E. Fornes, acting mayor of New York, by John Fritz, president of the American reception committee, and by James Gayley, president of the American Institute of Mining Engineers. Andrew Carnegie,

L.L. D., as president of the institute, responded to the addresses of welcome. After thanking the committee for the cordial welcome given the visitors, he went on to speak of the rapid development of the iron and steel industry in America since the institute last met there, 14 years ago, quoting figures to give weight to his words. In 1890 the product of pig iron for the year was 9,200,000 tons, while in 1903, 13 years afterwards, it was 18,000,000 tons.

An important event at the meeting was the presentation, by Sir James Kitson, Bart., M. P., on behalf of the council of the Iron and Steel Institute, of the Bessemer gold medal to Andrew Carnegie, L.L. D., in recognition of his services in the iron and steel world.

TECHNICAL SESSIONS.

There were two technical sessions of the institute, in the morning and in the afternoon of October 25. During the morning session the paper read by James Gayley on "The Application of Dry Air Blast to the Manufacture of Iron," was the centre of interest and discussion. This paper will be presented in next week's issue of Hardware and Metal. It announces the most important development in the iron industry in recent years.

E. W. Richards, past president of the institute, in commenting on the paper said in part: "We are all aware that the blast furnace is a very sensitive instrument. I consider that Mr. Gayley is on the right road to great success, and I hope the apparatus will not be a very expensive one. I suppose it is too early for Mr. Gayley to let us know what the saving is likely to be. If we could produce pig iron considerably cheaper than we can at the present time it would be a very great advantage to our trade, which is at present, I know at least on the other side of the water, in a somewhat unremunerative condition."

DR. RAYMOND'S REMARKS.

Dr. R. W. Raymond, honorary member, called upon to make some comment on the paper, said in part:

"I have had, I believe, the widest experience among the American blast furnace managers—a wide experience of furnaces in trouble. I have had charge

of furnaces which it seems could not keep out of trouble; but I have read pretty closely what is written on this subject on both sides of the water since the organization of the Iron and Steel Institute in 1869, and I have tried to criticize some, and I have tried to prophesy some, and I am not afraid to say that Mr. Gayley has contributed this day one more of the great classics which adorn the records of this institute.

"I think the most important thing in this paper is the principle that uniformity is the first requirement. It is not so important what the temperature is in Winter and Summer, but what the temperature is at 9 a. m. and 3 p. m. The great difficulty is that the air differs very much from hour to hour."

E. P. MARTIN'S REMARKS.

E. P. Martin when called upon said of the paper:

"All of us know or have felt the difference in the working of the furnaces in Summer and in Winter, and I think Mr. Gayley has hit the nail on the head by finding out for us that to have any real benefit the desiccation must be continuous and regular."

Besides the foregoing John Fritz, E. S. Cook, Pottstown, Pa., Andrew Lamberton, A. Sahlin and E. H. Saniter, all spoke in very complimentary terms of the ideas Mr. Gayley had brought out in his paper.

The morning session closed with the reading of the paper on "The Influence of Carbon, Phosphorus, Manganese and Sulphur on the Tensile Strength of Open Hearth Steel," by H. H. Campbell, of Steelton, Pa.

The afternoon session was devoted to the reading and discussion of other papers, including: "The Development and Use of High Speed Tool Steel," by J. M. Glendhill; "Comparison of Methods for the Determination of Carbon and Phosphorus in Steel," by Baron H. J. Von Jonstorff, Austria; Andrew A. Blair, United States; Gunnar Dillner, Sweden, and J. E. Stead, F.R.S., England; and "A West African Smelting House," by C. V. Bellamy, M. Inst., C. E., M. I., Mech. E., F.G.S., director of public works, Lagos.

NEW MONTREAL AGENT.

AS was mentioned in a recent issue of Hardware and Metal, Mr. J. A. Henderson has recently returned from England, where he obtained

several good agencies in hardware and metals. He has secured an office in room 501 Board of Trade Building, Montreal. Mr. Henderson is no stranger to the Montreal trade, as he was for several years connected with Henry Rogers, Sons & Co., of that city. Early in the Summer he severed his connection with that firm in order to start in business for himself.

Mr. Henderson's visit to England secured him several agencies for several prominent firms. Among these might be mentioned T. W. & J. Walker, of Wolverhampton. This firm manufacture the "Sword and Torch" brand of galvanized iron. J. H. Bent & Co., another firm which Mr. Henderson represents, manufacture brass cased tubings and fittings and stamped and spun brass ware. Mr. Henderson also represents Chas. Westwood & Sons, manufacturers of sterling silver plate, and the Morgan Spring Co., manufacturers of brake, pole, trolley and helicot springs.

With this line of exceptinnally good agencies Mr. Henderson should easily gain a good connection among the Canadian hardware trade. Hardware and Metal wishes him success.

STILL COMING TO CANADA.

The latest American firm to establish a Canadian branch at Hamilton, Ont., is the American Horseshoe Co., of Easton, Pa. The new company will erect a large building over 300 feet in length, and will employ 100 hands to start with. There is a rumor current that this firm is closely connected with the American Steel Corporation, and that this corporation will start a branch there also.

PERSONAL MENTION.

Mr. A. D. MacArthur, of A. D. MacArthur & Co., selling agents at Toronto for the Standard Ideal Sanitary Co., is ill of pneumonia.

Mr. Alex. Hill, general manager in Canada for the Singer Sewing Machine Co., is on his regular tour of inspection throughout Canada.

Mr. J. A. E. Bureau, late of the Canada Hardware Co., has joined the traveling staff of Lewis Bros., Montreal. He will cover the southern St. Lawrence district of Quebec Province.

The death occurred at her home on Bishop street, Montreal, on Tuesday, Nov. 1, of Mrs. Thos. Caverhill, mother of Mr. Geo. Caverhill, senior member of the wholesale hardware firm of Caverhill & Learmont, of Montreal.

Mr. Wm. Davie, of Sydney, Australia, was a caller at the Montreal office of Hardware and Metal this week. Mr. Davie has decided to make a permanent home in Canada and he is looking for a position as traveler with a

Canadian wholesale hardware house. As he was connected for years in Australia with one of the largest jobbing houses in that country his experience should stand him in good stead in Canada.

USED THE "ORB" BRAND.

The Mond Nickel Co., of Victoria Mines, are roofing their new smelter with galvanized corrugated iron supplied by H. S. Howland, Sons & Co., Limited, of Toronto. The iron is Lysaght's "Orb" brand, extra heavily coated and made specially for exposure to fumes such as those at the smelting works. It may be of interest to other consumers to note that galvanized iron could be obtained of extra grade for such purposes.

A BRILLIANT CAREER.

CORNELIUS SHIELDS, manager of the Lake Superior Corporation, who died at the Sault on October 28, and was buried this week at Lacrosse, Wisconsin, has had a most eventful career. He was born at Albany, N. Y., on New Year's Day, 1856, and entered the railway service in May, 1871, as a waterboy on the track-laying train of the Southern Minnesota R. R. He rose gradually to section hand, telegraph operator, station agent, train despatcher, chief train despatcher, assistant superintendent, superintendent Montana division of the St. Paul, Minneapolis & Manitoba R. R., assistant general superintendent Chicago, St. Paul & Kansas City R. R., general superintendent of the same road, general superintendent western division Great Northern R. R., general superintendent Chicago Great Western R. R., and vice-president Spokane Falls & Northern Nelson and Red Mountain Railways, and president of the latter.

In December, 1899, he was with the Virginia Iron, Coal & Coke Co., coming to Canada in 1901 to accept the position of general manager of the Dominion Coal Co. Two years ago he was appointed second vice-president and general manager of the Dominion Iron & Steel Co. In April, 1903, he became president and general manager of the Consolidated Lake Superior Co., and in August, 1904, general manager of the Lake Superior Corporation.

WILL START IN CANADA.

Hardware and Metal has learned on good authority that the American Axe and Tool Co., Glassport, Pa., and Montreal, have decided to establish a manufacturing branch in Canada. A representative has during the past few weeks visited several centres in the desire to secure a suitable site.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Hardware.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Nov. 4, 1904.

COMPARING the volume of business being done this week, with that of last, there is a marked contrast, for on all sides the falling off has been considerable. Being election week it could hardly be expected to be otherwise, as the affairs of the country are foremost in the minds of business men, even in many cases to the exclusion of the ordinary attention paid to trade. While this is essentially true of country business, that of the city has not been affected to as great an extent. The holiday on Tuesday of this week has also been a set back to Quebec trade. Travelers report little doing in the Townships, but are looking forward to unusually large orders next week. The deer hunting season is now in and there has been consequently a good showing in shot guns and rifles, and shot and ammunition. There are no price changes in hardware, all lines continuing the same. The usual Fall lines are comparatively active.

Carpet Sweepers—There is only a moderate amount of business being done. Quotations of a week ago still hold. We quote \$21 to \$31 a dozen.

Sewing Machines—In hand and complete sewing machines there is a good business doing. Our quotations are: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Food Choppers—The demand keeps up exceptionally well. Quotations are as follows: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Corn Cutters and Huskers—It was expected that the demand for these would have fallen off before this, but there is still considerable activity. We quote: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Agricultural Wrenches—Few of these are moving at present. We quote: 6 inch, \$2.85 a dozen; 8 inch, \$3.15; 10 inch, \$3.75; 12 inch, \$4.40; 15 inch, \$7.50 a dozen.

Skates—As stated before, a large quantity of skates are being ordered at present, specially for the rural trade, in which the present season promises to be an unusually active one. Our quotations are as follows: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality, concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Lanterns—A fairly good demand is reported and the stocks which were said to be low in these are now in good shape. We quote as before: Cold blast, \$7; No. 0 Safety, \$4 a dozen.

Sleigh Bells—The activity in these is somewhat lessened during the present week, but notwithstanding this fact the volume of business is very good. We give the following quotations: Brass team bells, rough, \$1.80 to \$4.50 a doz.; polished, \$2.10 to \$5 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—A steady trade has been done in these for several weeks, which seems to continue unabated. Our quotations are as follows: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Heavy Screw Hooks and Hinges—Few of these are moving at present. Our quotations are as follows: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—The market is fairly active, as hay baling is still being carried on to some extent, which occasions

the demand. We quote: \$2.25 per hundred pounds.

Barb Wire—The market is very quiet. Our quotations are as follows: \$2.75 per 100 lbs, f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Car lots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—Little or no galvanized wire is moving at present, and a resumption of activity is hardly expected until after the Winter. We quote as follows: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 8 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—Very few orders are coming in for fence staples at present. We quote as follows: \$2.65 per 100 lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—A larger volume of trade has been done in rivets and burrs during the past few weeks than formerly. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—A fair demand is reported, but the supplies are not complete in all sizes. Discounts are as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—The trade in bolts and nuts at the present is considerable. We quote: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow

bolts, 55 and 5 per cent.; black bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—As mentioned before no readjustment has as yet taken place in the wire nail situation, and no effort seems to have been taken by those concerned to bring about a change. The supply is not well up to the mark and it would seem that this would occasion a readjustment, or at least a settlement upon an established basis. Prices are not being quoted as they are the result of individual bargaining with the jobber.

Cut Nails—Business is only fair, with a slight shortage in some sizes. Quotations are as before: \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, and St. John.

Horseshoes—There is an active demand for horseshoes and manufacturers are working full force to keep the supply up to the mark. Our quotations are as follows: "P.B." new pattern, base price \$3.50 per 100 lbs; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—A good business is reported in all sizes. We quote list price: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22s; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. "P. B." brand 55 and 57 1-2 per cent. off list. Other brands, 55 and 60 per cent. off list.

Shot Guns and Rifles—The season for these is now well on and the biggest part of the trade has been already done. Now that the hunting season has opened up a few repeat orders and extras are being sent in. Prices remain the same and are to be had on application.

Ammunition—An unusually large number of hunters have gone north this season and consequently the demand for ammunition has been good. It keeps up well and good business is still

reported. We quote: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand.

Shot—Sales have fallen off somewhat but even yet business is fairly good. Our quotations are as follows: Standard \$6.50 per 100 lbs.; chilled, \$7 per 100 lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—The Fall trade in building paper has been rather listless, but within the past few weeks it has assumed a more active tone. We quote: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—Little business is reported in cordage at present, and few sales are noted. We quote as follows: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c, for 3 and 4-ply bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement and Firebrick—Very little change has taken place in this market. It has been a satisfactory one throughout this week, and it is not now expected to reach any considerable magnitude. We quote as follows: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—There is very little coil chain moving at present. The market is weak. We quote: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3, one inch, \$2.95.

METALS.

The metal market continues to be marked by advances in some lines, with a stronger feeling and upward tendency in most others. Southern pig iron has advanced from \$2.50 to \$3 a ton. In local markets prices have advanced in

some cases and advices from the Dominion Iron and Steel Co. state that the tendency is still decidedly upward with the near expectations of higher prices. Bar iron, tool steel, merchant steel, and cold rolled shafting are all strong and active. Galvanized iron has advanced still further. In Canada plates or black sheets there is no likelihood of a near change, as no more direct importation orders will be sent. Ingot copper and ingot zinc have both advanced and lead is at present the highest it has been for many months. There is little activity in scrap metal and old material.

Pig Iron—There has been considerable change in the pig iron market during the past week. The tendency at present is for the large corporations to stock up at low prices and one Ontario concern has placed orders for a supply until July 1st, 1905. There is every indication that the market will advance still further. It is believed that the market has reached its lowest and the tendency is towards a change for the better. Quotations are:

"Disc," No. 1.....	\$16.50 delivered Montreal.
"Dom.," No. 1.....	17.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 " "
Glenarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.50 delivered Montreal.
" (special).....	18.50 " "
Ayresome No. 1.....	18.00 " "
" No. 3.....	17.50 " "
Clarence No. 1.....	17.00 " "
" No. 3.....	16.50 " "
No. 1 Cleveland....	17.00 " "

Bar Iron—Manufacturers are very busy in order to keep up with the unusual demand for all sizes of bar iron. Stocks are in fairly good shape, but some sizes are still scarce. We quote: Merchants' Bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash thirty days.

Tool Steel—Market is quiet and fairly active. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jesop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c; Conqueror High Speed steel, 60c.

Merchant Steel—There is a firmness in merchant steel and a steady market. Supplies are in good shape and considerable stock is moving. We quote: Sleighshoe, \$1.77 1-2; tire, \$1.87 1-2; Spring, \$2.75; toe calk, \$2.37 1-2; machinery (iron finish), \$1.97 1-2; square barrow, \$1.87 1-2; reeled machinery

steel, \$2.75; mild, \$1.77 1-2; rivet, \$1.82 1-2. Net cash thirty days.

Cold Rolled Shafting—Industries either installing new machinery, or putting up new works are calling for considerable shafting. The market is firm and quotations are as follows: Cold rolled shafting, 3-4 in., to 17-16, \$3.85 per hundred lbs; inch and a half to 3 inch, \$3.50 per hundred lbs.

Canada Plates—While the market is strong no change is expected within the near future, as all Fall import orders have already been placed. There is a good demand. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—Stocks have been received for Winter orders. There is an active market and no change in price is reported. We quote: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—The stirring markets have advanced still further in galvanized iron, but as yet no additional prices are quoted in this market. There is a large amount of business being done. Stocks are in good shape. We quote "Sword and Torch" brands this week as a new quotation. Our prices are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Sheet Zinc—The price of sheet zinc has not been advanced within the past week, although such a change was anticipated. The market is very firm and prices quoted are strictly maintained, no concessions whatever being obtainable. We quote: Case lots, \$6.35 to \$6.60, and small quantities, \$6.60 to \$6.85.

Tin Plates—The market continues firmer with increases in the stirring market which as yet have not been sufficient to necessitate an advance in the local market. We quote, coke \$3.75, charcoal \$4.

Ingot Tin—A stronger market pre-

vails and considerable activity exists. The price quoted is being maintained with every indication of an early advance. We quote: 31 1-2 to 32c, the former price being for quantities only.

Ingot Copper—A further advance in ingot copper is noted this week. The market is very firm and fairly active. We quote: 14 1-2 to 14 3-4c, the former price being for quantities only.

Ingot Zinc—Ingot zinc has advanced a quarter of a cent a pound with a strong market and a further upward tendency. The market is fairly quiet. Quotations are 6c to 6 1-4c, the former price being firmly held and for quantities only.

Pig Lead—Not for many months has the market been as high as at present. It continues strong and fairly active. We quote: \$3.35 to \$3.45, no concessions being obtainable on the former price.

Scrap Metal and Old Material—Any trade that has been done in this within the last week has been in the direction of export, as some copper and brass and woollen rags have been sent to the Old Country. There is a good prospect of the local industries requiring considerable scrap iron in the near future. The deadlock in the rubber market still continues. Quotations are as follows: Heavy copper and wire, 11 1-2 to 12c; light copper, 10 1-2 to 11c; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 1-2 to 8 1-2c; light brass 5 to 5 1-2c; lead, 2 1-4c; zinc, 23-4 to 3c; iron, No. 1 wrought, \$11; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs; old rubbers, 5 1-2c.

ONTARIO MARKETS. Hardware.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Nov. 4, 1904.

ACTIVITY marks this market this week. There is a rush of orders coming in, in order that advantage may be taken of the Summer freight rates, which continue until November 14. This, though election week, has made no difference in the volume of business. The demand for Winter sporting goods is very active, and also for other Winter lines such as sleigh bells, etc. For shot guns and ammunition there is still a brisk demand, but not many orders are being received for rifles since the deer shooting season has commenced, and consequently there is not the demand now that there has been. The cutting in the price of wire nails

still goes on. There is no change in quotations this week, and general conditions remain unaltered.

Lawn Mowers—The trade are generally interested in this line and orders are starting to come in nicely. Prices for 1905 are as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discount 50 per cent. with freight concessions in quantity shipments.

Guns and Ammunition—There is still a good demand for shot guns and ammunition, but there is a slight falling off in the demand for rifles. The deer hunting season has commenced, and rifles for that purpose have been nearly all sold.

Washing Machines—Our quotations are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Ecilpse, \$48; Dowsell, \$36; New Century, \$72; Capital, \$42; Magic, \$25; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Chain—We quote as follows; 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Clothes Reels—The Davis (W. L. Co.), 40 per cent. off list.

Barb Wire—Orders for future delivery are being taken. We quote \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—Some business is doing with prices steady as below: No. 5, \$3.45; Nos. 6, 7, and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Inquiries continue regarding prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

Drummond McCall & Co.
MONTREAL, QUE.

or to

Canada Iron Furnace Co.
MIDLAND, ONT. Limited

We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
GRE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited
Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

to other points up to 25c; carlots, \$2.65;
freight allowance to 20c.

Wire Nails—Cutting continues in all parts of the country and some very low prices are heard of. A nominally fair quotation would be about \$2.25 per keg f.o.b. Toronto, with car loads at \$2.20.

Cut Nails—There is still a fair business doing though prices are comparatively firm. We quote: \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are "C" brands, 40, 10 and 71-2 per cent.; "P.B." brands, 55 to 57 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—The volume of business in screws keeps large. Prices are steady. We make the following quotations: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Prices have been confirmed. A good business is doing. We quote as follows: Iron rivets, 60 and 10 per cent. discount; iron burrs, 55 per cent.; copper rivets with usual proportion of burrs, 45 per cent.

Bolts and Nuts—Manufacturers are calling for an increased number of bolts and nuts. Prices show no change. We quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; nuts, hex., all sizes, 41-4c per lb.; square,

Woodenware—We quote: Tubs, No. 0, \$11.25; No. 1, \$9; No. 2, \$8; No. 3, \$7; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

Sheet Zinc Sheet Copper

and other Metals.

From Stock or for Import.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

Ask your customers

if they don't need new pumps.

If they do, sell them our

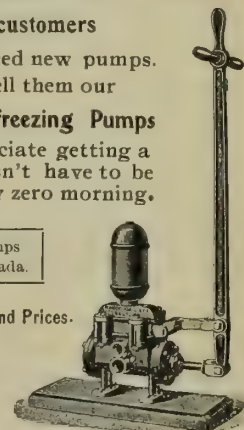
Standard Anti-Freezing Pumps

They'll appreciate getting a pump that doesn't have to be thawed out every zero morning.

McDougall Pumps
—Made in Canada.

Write for Catalogue and Prices.

The
R. McDougall Co.
Limited
Galt, Ont.



"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel
for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.
SHEFFIELD, ENG.

Agents for Ontario:
BAINES & PECKOVER, Toronto
Agents for British Columbia:
E. G. PRIOR & CO., Limited, Victoria.
Canadian Rep.
D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

Cordage—Business is being well booked up for rope and the jobbers are preparing for the binder twine trade for next season. Our quotations are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sash cord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2c to 22c; 5-32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3-ply, 24c; 4-ply, 29c; ealking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

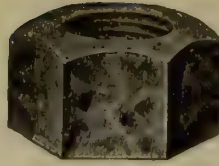
Cement—The demand for Canadian and American Portland still continues to be good. Practically speaking, no sales are being made in Belgium and English cement owing to high freight rates. Prices remain the same. We quote: the following prices: Canadian Portland, \$1.70 to \$2.00; English \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex store; American Portland, \$1.70 to \$2.00 f.o.b. Toronto.

Firebrick—Conditions continue the same. Prices are unchanged and will doubtless continue so till the closing of navigation. We quote the following markets: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Building Paper—Latest reports state no decrease in the demand. Prices continue unchanged, and indications point to a continuation of present conditions. Trade is brisk. Our quotations are: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slater's felt, 60c per roll.

METALS.

The situation on the metal market is much the same as last week. It is gaining strength, in unison with the American and English markets. In the States the pig iron prices are advancing sharply, and in England, Middlesboro has advanced during the past week. As was stated last week the Midland furnace production is oversold, and that pig iron is not in the market at present. Hamilton pig iron is very firm. Other metal lines are also advancing in unison with the general market. Ingot tin has advanced \$1 per 100 lbs.; ingot copper has stiffened 25c per 100 lbs; zinc sheets



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs. Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.



SIDE CUTTERS

Long Nose, Needle Point.

An excellent tool for telephone manufacturers, machinists, jewelers, engineers, opticians, electricians, etc.

See for Plyer section of the "Green Book of Hardware Specialties."

SMITH & HEMENWAY CO.

Mfrs. of Cutlery and Hardware Specialties.

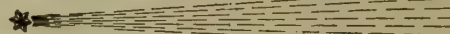
UTICA DROP FORGE & TOOL CO.

Mfrs. of Nippers and Plyers.

204 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL. ALLEN C. JENKING, Canadian Manager

GILBERTSON'S



COMET

Agent: ALEXANDER GIBB, Montreal.

Brand Galvanized Sheets

will double seam either way of grain. High grade and low price. Every sheet guaranteed.

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.

Clauss Brand TAILORS' Shears

Fully Warranted

These goods are the BEST and are EQUALLED only by such other goods as are manufactured by



Write for trade discount.

CLAUSS SHEAR CO., 169 Spadina Ave., Toronto, Ont.



ALL OBJECTIONS

made to the common run of Stove Cements are met and banished with

Sterne's Asbestos Stove Cement

Circular tells all about it. Send for it. "Your money back," protects you if you send us an order.

G. F. STERNE & SON, Sole Makers, Brantford, Ont.

J. H. Hanson, 422 St. Paul St., Montreal, Eastern Agent



The Perfect Boiler

There is no other boiler made that equals the one I make. I know it. I've installed pretty nearly every kind of furnace made in my 16 years experience. My

Economical Hot Water Boiler

has the good features of others and two or three peculiar to itself. Study more about it. Send for catalogue.

P. Gies, Founder, Berlin, Ont.

30

WRITE FOR PRICES AND DETAILS

Merrick, Anderson & Co.

NORTHWEST DISTRIBUTORS

WINNIPEG.

"Hot Blast" Line for Coal.

For Soft, Hard or Lignite Coal, Coke, Etc.

Made by the D. Moore Company,
of Hamilton.

RETURNED

MAR 2 1905

For
Soft Coal
Hard Coal
Lignite
Slack, etc.Heavy
draw
centre
shaking
grate and
lining.
Heavy or-
namental
legs and
base.

STRATHCONA HOT BLAST

KNOWN EVERYWHERE

MANITOBA DEPOT

Merrick, Anderson & Co.

117 Bannatyne St. East, - Winnipeg.

RETURNED

MAR 2 1905

To. & 9y 000

W Book 30

Page 80



STRATHCONA DOUBLE HEATER

No.	Diameter of Body.	Approximate Shipping Weight.
1115	15 inches.	134 pounds.
1118	18 "	174 "

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL

Room 515 McIntyre Block,

Winnipeg, Oct. 31, 1904.

ACCORDING to the latest crop bulletin the Spring wheat area this year in the Territories was 1,049,799 acres, with a yield of 20,340,000 bushels; Fall wheat, 5,483 acres, estimated yield of 106,000 bushels.

* * *

The J. H. Ashdown Co., after a reconsideration as regards building, have decided to erect a six-storey block on their old site. Building operations will commence at once. Before the cold weather sets in the first floor will be built in order to facilitate the carrying on of the retail business as soon as possible.

* * *

Business for the past week has been quite up to the expectations of the trade, and there has been practically no change in the price list.

Barbed wire, 100 lb.	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91

Annealed wires (uncoiled) 10c. less.

Horseshoes, iron, No. 0 to No. 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 20
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Horsenails, No. 4-1 1/2 in., list price.....	0 48
".....5-2.....	0 32
".....6-2 1/2.....	0 28
".....7-2 1/2.....	0 24
".....8-2 3/8.....	0 22
".....9-2 1/2.....	0 20
".....10-2 1/2.....	0 20
".....11-2 1/2.....	0 20
".....12-2 1/2.....	0 20
".....14-3 1/2.....	0 20

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

Cut Nails—	Wire Nails—
2d 1 in.....\$1 10	1 in.....4 15
3d Fin. 1 1/2 in.. 4 10	1 1/2 in.....4 10
3d 1 1/2 in.....3 75	1 1/2 ".....3 70
4d 1 1/2 in.....3 50	1 1/2 ".....3 50
5d 1 1/2 in.....3 50	1 1/2 ".....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2 1/2 in.....3 25	2 1/2 ".....3 25
10d 3 in.....3 20	3 ".....3 20
20d 4 in.....3 15	3 1/2 ".....3 15
30d 4 1/2 in.....3 10	4 ".....3 10
40d 5 in.....3 10	4 1/2 ".....3 10
50d 5 1/2 in.....3 10	5 ".....3 10
60d 6 in.....3 10	5 1/2 ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00

Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10
Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10 1/2 oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	
Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28.....	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	
Genuine Russian, per lb.....	11
Imitation.....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05
Tinplate, 1C charcoal, 20 x 28, box.....	9 50
" IX.....	11 50
" IXX.....	13 50
Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50
Pig lead, 100 lb.....	5 00
Black iron pipe, 1/2 inch.....	
" 3/4 ".....	2 82
" 1 ".....	3 80
Black iron pipe, 1/2 inch.....	4 20
" 1 ".....	5 25
" 1 1/4 ".....	8 50
" 1 1/2 ".....	10 00
" 2 ".....	14 00
Rope, sisal, 7-16 and larger, basis.....	10 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrn.....	11 25
Solder.....	20
Axes, chopping.....\$ 6 75 to 12 00	
" double bits.....	12 00 to 18 00
Bluestone.....	5 25
Screws, flat head, iron, bright.....85 and 10 p.c.	
Round ".....	80 p.c.
Flat " brass.....	75 and 10 p.c.
Round ".....	70 and 10 p.c.
Coach.....	70 p.c.
Bolts, carriage, 3/4 or smaller.....	60 and 5 p.c.
" 7-16 and up.....	55 p.c.
Bolts, machine, 3/4 and under.....	55 and 5 p.c.
" 7-16 and over.....	55 p.c.
Bolts, tire.....	60 and 5 p.c.
Bolt ends.....	55 and 5 p.c.
Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	55 and 5 p.c.
Square nuts, case lots.....	3c. discount.
" small lots.....	2 1/2 c.
Hex.....	3c.
" smaller lots.....	2 1/2 c.
Rivets, iron.....	50 and 10 p.c.
Copper, No. 8.....	32
No. 12.....	36
Coil chain, 3-16 inch.....	9 1/2
" 1/2 inch.....	7 1/2
" 5-16 inch.....	5 1/2
" 1/2 inch.....	5 1/2
" 7-16 inch.....	4 1/2
" 1/2 inch.....	4 1/2
" 3/4 and 1/2 inch.....	4
Spades and shovels.....	40 and 5 p.c.
Harvest tools.....	60 p.c.
Axe handles, turned, s. g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60
Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.
Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67 1/2 c.
" tarred.....	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.

Ammunition, cartridges, American R.F.	30 p.c.
C.F. pistol.....	5 p.c
C.F. military.....	10 p.c. advance
Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00
Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 55
Powder, F.F., keg.....	4 70
F.F.G.....	5 00
▼ Tinware, pressed, retinned.....	70 and 10 p.c.
plain.....	75 and 2½ p.c.
pieced.....	
Japanned ware.....	37½ p.c.
Enamelled ware, white.....	45 p.c.
Famous.....	50 and 10 p.c.
Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American.....	27¼c.
Prime white American.....	25¼c.
Water white Canadian.....	25¼c.
Prime white Canadian.....	24¼c.

SCRAP.

No. 1 cast iron.....	\$14 to 15
No. 2.....	7
Wrought iron scrap.....	5
Copper (heavy).....	8¼c. per lb.
Yellow brass (heavy).....	7¼c. "
Light brass.....	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2¼c. "
Zinc scrap.....	1c. "

PAINTS, OILS AND GLASS.

White lead.....	\$5 00 to \$5 50
Putty in bladder, 2¼ lb., in keg of 100 lbs.	0 02½
Turpentine, pure, in barrels.....	\$ 0 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
Boiled.....	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.75; 26 to 40, \$4.00; 41 to 50, \$4.50; 51 to 60, \$5.00; 61 to 70, \$5.00, in 100-ft. boxes.	
Lubricating oils, heavy castor machine....	0 29
" " extra engine.....	0 27
" " dynamo.....	0 35
" " black.....	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	
Harness oil.....	0 50 to 0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00½
2nd pressure.....	1 09½

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B. C., Oct. 28, 1904.

INCREASED development of the resources of the interior of the province is what is now being looked for, and it is expected that when once begun it will far exceed the proportions now thought of. Mr. Lewis Stockett and Mr. Paul Reisinger, both of Great Falls, Montana, were in the city this week, having just returned from a trip through the Similkameen and Nicola districts, where they were inspecting the coal properties. Both are experts in regard to coal, and when they reached Vancouver they were met by Mr. Thos. R. Stockett, brother of Lewis, who is manager of the Western Fuel Co.'s operations at Nanaimo, and formerly superintendent of the Crow's Nest Pass Coal Co. The two first mentioned entered the province from Loomis, Wash., and made a very thorough inspection of all the coal measures in the interior, though

for what purpose they will not divulge. It is stated on fair authority that since the Great Northern and other railways are about to be constructed in that portion of the province, that two large companies are about to secure what coal properties are available. One of these is the Great Northern, which is a reasonable conclusion because that is about the only kind of a necessary mine that Jim Hill now wants in British Columbia and does not own exclusively.

* * *

The manufacturing of wooden pipe is one of the rapidly extending industries of Vancouver. On Wednesday of this week three carloads of pipe were sent to Three Forks, where it will be used in the installation of a system of water-works at the Monitor-Ajax mine. Because of the increase of freight rates from Spokane, the Pacific Coast Pipe Co. has decided to reduce its factory at that city, and build up their places of business at Vancouver, B. C., and Ballard, Wash. The quality of the product is undisputed, and the difference in cost and transportation make it advantageous to the buyer. Especially is it adapted for mining work, as it may be suspended, which is a great consideration. Frost does not break them so easily, as they expand with the pressure and contract when thaw sets in. In regard to their preservation when underground, it is remarkable that when the City of Victoria prepared its main street for pavement a couple of years ago, and took out the wooden pipe which had been doing service since 1858, it was found that the fir had deteriorated slightly, and that the forty years of service was hardly noticed. The pipe manufactured here is from three inch specially selected material, which is grooved and shaped, and bound with wire, making it as solid as iron.

* * *

Orillia people who are interested in the Ontario-Slocan saw mill, located at Slocan, have decided not to improve their facilities this Winter because of the demoralization of the prices of lumber and shingles. A small stock of logs will be taken out this Winter.

Mr. George H. Robinson, managing director of the Britannia Mines Co., has purchased the interests of Mr. Frank M. Leonard and other Montana people, which are about one-eighth of the entire holdings. Mr. Leonard, who has great faith in the future of the property, only sold because he was making a good profit on his investment. As soon as the tramway is completed at the mine by the Riblet Co., the extensive plan of development proposed will be carried out. Col. Henry Stern, of New York, also interested, is in the city at present.

British Columbia stone is coming into extensive use in the United States for building purposes. For some time a quarry near Nanaimo has been worked by San Francisco contractors, who used the stone themselves, and Seattle is also drawing from the province's resources. On Saturday the Albion towed a large scow load to the Puget Sound city, the stone to be used in the construction of the new postoffice there. Some of the pieces weighed ten tons, and were mined at Jervis inlet.

Messrs. Armstrong & Morrison, who had the contract of constructing the Government bridge at New Westminster, are about to erect a plant for the manufacture of cement blocks for building purposes. The firm has the contract of building the stone pier for the swing of the V., W. & Y. bridge across False Creek, and the wharves to be built will be afterward used as a docking place for the material and product of the cement plant. In the Territories particularly this kind of building material has come into use lately.

The City of Nelson has taken over the tramway of that city, which has been operated by the company for the last five years at a loss. It will be a municipal enterprise for five years.

A thousand-pound mineral exhibit arrived in the city from Princeton yesterday. It is a very attractive one, and should be a great advertisement for the Similkameen district. It will be on view in the rooms of the Tourist Association.

The tug Lorne, the best in Northern Pacific waters, built to the order of R. Dunsmuir & Sons in 1899, has been purchased by the Puget Sound Tugboat Co. She will still fly the British flag, and will be operated from Victoria as usual. This company has now a monopoly of the towing business in local waters.

Timber Ranger John Murray has returned from a trip to the headwaters of the Skagit River, where he went to investigate the report that timber was being exported from provincial lands without payment of the special tax. He found everything all right. It is stated, though, that the law is being winked at in other places.

The Canadian Oil Co., Limited, of Toronto, has erected a large new iron-covered warehouse near Nelson, and will make that city the distributing point for the Kootenays for its product. There is a good trade to be secured in that section.

The E. K. Woods Lumber Co., San Francisco, which controls large timber limits on Vancouver Island, near Nanaimo, will not erect the mill it proposed a few months ago. It will wait for better times.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " 1 year.....	10 00

SITUATIONS VACANT.

FIRST-CLASS MOULDER WANTED—One who thoroughly understands making follow boards; steady employment to good hand. Apply at once, Taylor-Forbes Co., Guelph.

WANTED—Man who thoroughly understands the value of sheepskins; to travel. W. H. Guest, 1-7 Laing Street.

FOR SALE.

FOR SALE—Good paying tinshop; good dairy trade; large cavetrough business; everything complete for the work; stock, tools, horse, rigs, cheap. R. B. Scriven, Otterville, Ont. (48)

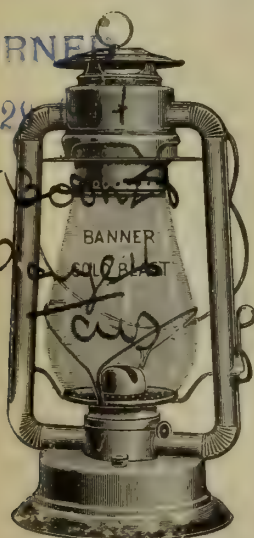
PAINTS AND VARNISH AGENCY

GERMAN jobbing house is open to represent Canadian manufacturer of paints, oils, varnishes, etc. References. Address Box 195, HARDWARE AND METAL, Montreal.

CUSTOMS BROKERS,
FORWARDING and DISTRIBUTING AGENTS,
FREE AND BONDED STORAGE

TURNBULL & HENDERSON, Vancouver, B.C.

THE BANNER ALWAYS LEADS.



**Brilliant
Light.
Wind
Proof.**

For sale by all prominent jobbers throughout the Dominion.

Manufactured by the

Ontario Lantern & Lamp Co.
Hamilton, Ont. Limited

PITTSBURG METAL MARKET.

From the Iron Trade Review, Nov. 3, 1904

Pig Iron—Prices have again advanced during the week, some operators now holding No. 2 foundry on the basis of \$13.75 at the furnace. Bessemer is held at \$13.25 to \$13.50 and basic on the same basis. Southern iron is firm at \$12 Birmingham, although a little iron is still offered until the first of the year at \$11.75. For delivery next year nothing better than \$12 can be done. Forge iron is firm at \$13, Pittsburgh. We revise quotations as follows:

Bessemer, Valley	\$13 25 to	\$13 50
Bessemer, Pittsburgh.....	14 15 to	14 45
No. 1 Foundry.....	14 85 to	15 00
No. 2 Foundry	14 35 to	14 60
Grav forge, Pittsburgh.....	12 85 to	13 00
Chilled basic, Valley	13 00 to	13 25
Chilled basic, Pittsburgh....	13 85 to	14 10

Steel—Owing to the recent advances in pig iron, higher steel prices are talked of, but it is probable that action will be deferred until the first of the year. Some of the producers are asking an advance of 50 cents above pool prices, but all sales are being made on the basis agreed upon at the last meeting. Forging billets which were reduced to the same basis as ordinary billets at the late meeting have been advanced \$2 per ton. We make the following quotations: Bessemer and open-hearth billets, 4 x 4 in., and slabs, up to and including 0.25 carbon, \$19.50 f.o.b. mill, Pittsburgh, with actual freight added to point of delivery; 0.26 and including 0.60 carbon, \$1 advance; 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 4x4 in., \$2 advance; sheet and tin bars, \$2 advance. Bessemer and open-hearth rods are held at \$25 to \$25.50.

Rails and Track Material—Rail mills continue to operate on orders for Canadian shipment which are being pushed forward as rapidly as possible this month.

Plates—It is now estimated that the car works have orders on their books for fully 25,000 cars. Most of these will be all steel, and plate mills are expecting to receive heavy specifications within the next four weeks. Orders for the material for lake carriers are also expected to come forward shortly, and the outlook for a steady run of the plate mills throughout the Winter months is unusually bright.

Bars—Demand for both iron and steel bars continues good, and manufacturers of iron bars have advanced prices. The minimum on iron bars Pittsburgh is 1.35c, and one large producer is securing 1.40c.

Structural Material—Little new business is being placed, and the mills do not expect any increased tonnage until after the first of the year. Quotations are unchanged.

Pipes and Tubes—On Tuesday, November 1, quotations on iron and steel pipe were advanced one point. This is an advance of two points in as many weeks. Demand for pipe is much better than it has been and while prices are still very low consumers are covering for future requirements.

Wire and Wire Nails—Both iron and steel cut nails are held on the basis of \$1.55 per keg by the leading interest, and all efforts on the part of the cut nail association to advance prices while this producer continues to hold his product so low will amount to little. Demand for wire and wire products continues good and orders continue to be booked only for shipment until the first of next month. Iron and steel cut nails are held at \$1.65 to \$1.70.

Merchant Steel—Demand is only fair and prices continue unchanged as follows: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.50c to 1.55c; plow steel 6 in. and under, 1.35c for Bessemer and open-hearth; plow slabs, 1-4 in. and heavier, 1.60c. Drawn and cold rolled shafting is held at 52 per cent off in carload lots and 47 off in less than carload lots.

Coke—Furnace and foundry operators have been covering coke requirements for the first half of next year, and sales of coke the past week have been heavier than at any time this year. Furnace coke contracts were closed at prices ranging from \$1.60 to \$1.80, while foundry coke was sold at \$1.90 to \$2. Some contracts for foundry coke were placed at \$2.50, but this price was only paid for exceptional material.

INQUIRIES FOR CANADIAN TRADE.

The following inquiries for Canadian trade have been received by the Department of Trade and Commerce, at Ottawa:

42. A French firm desires to be put in communication with Canadian exporters of wooden packing cases. The firm in question could place a yearly order in Canada for 500,000 to 1,000,000 such cases.

The following inquiries concerning Canadian trade have been received by the Curator, Canadian section, Imperial Institute, London, Eng.:

96. Glasgow house would like to hear from a firm in Western Canada open to

handle tar products, chemicals, firebricks and fire clay goods.

97. A company manufacturing dry colors and paints is ready to appoint suitable Canadian resident agent.

The following inquiries have been received from Birmingham, Eng., concerning Canadian trade:

91. A firm in the Midlands wishes to place in Canada horticultural brass foundry syringes, garden engines, hose fittings, etc.

92. A large firm in Birmingham wishes to get in communication with a firm in Canada who can supply them with dowel sticks.

Inquiry concerning Canadian trade has been received from Leeds, Eng.:

72. Large firm of wool merchants desire direct communication with Canadian buyers of wool, nails and tops.

RECENT TORONTO CONTRACTS

Joseph Harrison, Toronto, has received the following contracts: The installation of steam heating apparatus in Millichamp & Erwin Co.'s new warehouse; hot water heating for Computing Scale Co., of Toronto; hot water heating in the residence of W. H. Blake,

Rosedale; the installation of steam heating apparatus in the warehouse of Wm. Jessop & Son, 80 Bay street; also the installation of steam heating in the Snyder estate building, Bay street.

Purdy, Mansell & Co., Toronto, have received the following contracts: C. B. Harrison's dwelling on Delaware avenue, hot water and plumbing; the installation of gas and fittings in the residence of J. J. Ramsay, Western avenue; also the installation of hot water fittings in the residence of Mr. Thornton, manager of the Dominion Bank in Whitby.

MONTREAL BUILDING PERMITS.

O. Binelle, Frontenac street, one house, \$1,600.

T. Sagala, Huntley street, one house, \$2,000.

Mrs. G. McNamee, cor. Craig and St. Antoine, one building, \$9,000.

F. Giroux, Chambord street, one building, \$2,500.

W. Clark, Wolfe street, one warehouse, \$12,000.

Mrs. A. Laroe, Labelle street, one house, \$1,500.

Trustees St. Bridget Church, Maison-

neuve street, alterations on church, \$2,500.

R. G. Noel, Charlevoix street, one house, \$6,000.

I. Labelle, St. Hubert street, one house, \$1,800.

F. Tremblay & Co., St. Denis street, two houses, \$10,000.

P. Smirlie, St. Charles Borromeo street, one house and store, \$4,000.

Wm. Patley, Oxenden avenue, one house, \$9,000.

W. Labrecque, St. Urbain street, one house, \$3,000.

J. Ferron, St. Hubert street, one house, \$1,400.

P. Paquette & Son, Demointigny street, one house, \$1,000.

H. Filteau, St. Hubert street, one house, \$1,800.

J. S. Smith, Selkirk avenue, house containing nine dwellings, \$12,000.

D. Roy, St. Edward street, four houses, \$8,000.


W. H. Barry, Sherbrooke avenue, alteration on building, \$1,000.

M. McBouillon, Coleraine street, alteration on house, \$1,000.

Lake of the Woods Milling So., alteration on warehouse, \$3,000.

SILVERWARE THAT SELLS

Gift-Buying for Christmas

It is absolutely certain that if you have a nice range of silverware on show between now and Christmas you will have good Silverware Sales—sales that are profitable and sales that advertise you for a long time to come. But it is fatal to sell inferior silverware. There is a make of Silverware which is guaranteed, and which you can guarantee. It bears this mark  and is known as "STANDARD SILVERWARE." Impossible to get a better quality outside sterling goods. Designs are thoroughly modern and good-selling Workmanship all that can be desired. Send us your order by mail if you cannot give it otherwise. Tell us what you want and the amount you wish to spend. We guarantee to fill your order to your satisfaction.

Our Catalogue free to those requesting it.

THE STANDARD SILVER CO., Limited,

HAYTER ST., TORONTO.

PAINT, OIL AND BRUSH TRADES

CARRIAGE AND WAGON PAINTING.*

By M. C. HILICK.

THE mixing of colors, in view of the fact that the manufacture of them has now reached a very high state of perfection, would seem to be a comparatively easy matter, but it must be understood that in vehicle painting, business vehicle painting especially, there are many hues, tints, and shades demanded which the color maker does not furnish. Such mixtures have to be prepared by the painter, and the work becomes a skilled operation. First he must be fortified with a clear knowledge of the proportions of the ingredients required to form the desired color or hue thereof, or tint or shade. Then he must skillfully and perfectly combine them. The word "perfectly" is emphasized because if the constituents be not perfectly combined, a long train of evils is invited. A most minute and perfect incorporation of all the particles of the paint materials must be made, otherwise a lack of uniformity in strength, coloring, and covering power results. Certain colors have a property of unduly asserting themselves when combined with certain other colors in the mixing cup, and if allowance be not made for this assertive strength and a very thorough mixture of the parts affected, the color, when applied to the surface, is apt to show streaks. Some pigments require grinding upon the slab under the muller to obtain an absolutely perfect commingling of the particles.

This rule applies to the mixing of pigments: The more perfect the mixing, the more perfect the product; perfect not only as regards its strength, permanence, and brilliancy of color, but perfect also as regards its working properties.

While two or more pigments may mix nicely together, they may not liquify readily, and unless the workman be thorough in his mixing operations, lack of a uniform film of color ensues, a condition which later on develops the faded and bleached out surface, and in many instances the flaking and shelly one. The painter who would become a skilled mixer of pigments will insist upon exact quantitative measurements of all the ingredients he may employ, both liquids and solids, when such measurements are possible, and he will further see that the ingredients are perfectly united.

The attainment of a high average of

results in the use of colors depends greatly upon the achievements of the color maker and upon the uniform quality of his product. Fineness of grinding, uniformity of color in respect to its coloring and covering power, and brilliancy, are valued essentials. It is necessary that the painter should get from the color maker not one, two, or three successive lots of color that are of standard color, tint, or shade, but every lot should correspond to the exact standard. When the painter opens a new lot of color, he desires it to be exactly like the last in every particular, provided, of course, the last lot was standard. Hence, uniformity of color, of tint, of shade, of quality throughout, is a requirement with which the color maker may properly be expected to comply. It will thus be observed that the purchase of colors is one of the really important steps leading up to fine and durable color effects.

In testing a color for covering power or opacity, for coloring strength, and for brilliancy, comparison should always be made with a strictly standard color.

To assay for covering power or opacity, weigh out, say 50 grains, of the standard color and the same number of grains of the color under examination, and to each sample add 10 grains of fine china clay, if the colors be dark, or 10 grains of the highest grade of lampblack (this being a pure black) should they be light, and mix intimately. The sample which departs the least from its own color has the best body or covering power. Or mix exactly equal quantities of the standard color and the color to be assayed, in equal quantities of raw linseed oil, incorporating the oil and the pigment thoroughly, and then apply to glass surfaces (small panes of window glass answer the purpose fully), spreading the pigment as evenly as possible. The sample covering the glass most solidly has the strongest covering power.

Your present profits larger and a future trade established if you handle

Hollywood Paints
Elastilite Varnish
Granitine Floor Finish
Orolite Oil Finish
Mangalite Drier
M. L. Coach Enamel
M. L. Varnish Stain
Chijap Floor Lac



and our other specialties.

THEY WEAR ON THE JOB, NOT OFF IT.

The Imperial Varnish & Color Co.
TORONTO, ONTARIO, CANADA. LIMITED,

* Extract from Practical Carriage and Wagon Painting.

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the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

BERRY BROTHERS, Limited

VARNISH MANUFACTURERS

WALKERVILLE, ONT.

Write for our 100 page illustrated catalogue. Every dealer should have a copy for reference.

PENNOLINE

W. W. AMERICAN OIL has no equal.

Write for prices to any of the following branches:

Toronto, Ont.	-	-	St. John, N.B.
Hamilton, Ont.	-	-	Halifax, N.S.
Winnipeg, Man.	-	-	Montreal, Que.
Vancouver, B.C.	-	-	Petrolea, Ont.

CANADIAN OIL COMPANY, Limited

T. H. HAMILTON, General Manager

Cor. Front and Scott Sts., TORONTO

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Nov. 4, 1904.

A FAIR volume of business has been done for the past week, although the excitement consequent to the elections has materially interfered with the volume of business expected. However, it is surmised that the coming week will see a splendid rush of business, and it is anticipated that the balance of November trade will be very active. There are no changes to note in staples. There has been a fair inquiry for furniture and carriage varnishes, which steadily keep their quotations in view of the extreme firmness in turpentine. This is generally the case at this season of the year.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2 \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1. 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Turpentine—Single barrels, 81 1-2c per gallon; two to four barrels, 80 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs. The above prices are net 30 days; for longer terms prices are higher. The market is firm.

Linseed Oil—Raw, 1 to 4 barrels 44 to 45c; 5 to 9 barrels, 43 to 44c; boiled, 1 to 4 barrels, 47 to 48c; 5 to 9 barrels, 46 to 47c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon in advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, Nov. 4, 1904.

THE principal item of interest in paints and oils this week is the drop of 1c all around in linseed oil, the result of English competition. As the English markets, however, are advancing, and as there will be no more shipments to Montreal, for this season, after the arrival of cargoes now afloat, a corresponding advance in Ontario markets is not unexpected. Our quotations are as follows:

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lbs. and upwards: 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs., \$4.25; ditto, in kegs of 100 lbs., \$4.50; No. 1, in casks of 560 lbs., \$3.75 to \$4; ditto, in kegs of 100 lbs., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6. to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$3 to \$3.10; white, \$3.10 to \$3.20 per gallon; No. 1 (orange), \$2.50.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 45c; boiled 48c; 5 to 9 bbls, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls, 79c; 2 to 4 bbls, 78c, Toronto; 5 bbls and over, f.o.b. point of shipment, net 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gal-

gon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb.; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$2 to \$2.10, bulk in barrels, \$1.50; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2c per lb. and 8 1-2 for single tins.

Window Glass.

MONTREAL.

Not in years has the supply of glass been as low as is found to be the case in the city of Montreal at the present time. Jobbers who had formerly as much as ten thousand boxes at this time of the year, now have less than 500, and this is a fair index to the situation. Although prices were advanced three weeks ago, there is every reason to believe that another advance of 25c a box will materialize shortly. We quote as follows: First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent discount thirty days.

TORONTO.

A sharp market is reported for the week in glass, with brisk demand and the market nearly bare. Under ordinary

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.

LINSEED OIL

WHY? WHEN? WHERE?

WHY should we try to impress on the trade the advantage of selling Livingston's celebrated brand of pure, Raw and Boiled, Linseed Oil?—Is it because we are the only firm manufacturing Linseed Oil? No; it is because we know that in handling our line you not only secure the best, but are protected by the experience of more than forty years of manufacturers whose career has been of the highest type.

WHEN should you begin? As many others have done in the past, after their trade had been ruined by the use of inferior goods, and they saw that they were compelled to make a fresh start? No, begin at once. In doing so you may rest assured that you are protecting your trade and making your business a most profitable one.

WHERE? That word is one to be considered. We suggest that you try where your own interests are at stake, at home, so that you may have an ever eager eye to follow results.

The Dominion Linseed Oil Co.

Limited

HEAD OFFICE : 34 YONGE ST., TORONTO.

FACTORIES: BADEN, FLORA, GUELPH, OWEN SOUND, ONT.
and 31 Mill Street, MONTREAL.

NEW PATENT STABLE FIXTURES

Galvanized
Steel Watering
Bowl
and
Steel U Bar
Stanchions.

A profitable line for the trade. These fixtures are easily installed, are very durable, will not get out of order, and as they save one-third of the feed and are a great convenience, every progressive farmer will want them. The demand has already been created and the trade will find it in their interests to carry samples and equip themselves to install systems.



The Metal Shingle and Siding Co.

PRESTON, ONT.

LIMITED

Western Agency:
ELLIS & GROGAN,
CALGARY.

Manitoba Agency:
CLARE & BROCKEST,
WINNIPEG.

Montreal Agency:
J. B. DAGENAIS
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Gillett's Lye
Won't Clean Elections

but it cleans and purifies a hundred and one things that need cleaning. The label on our special circular mentions some of them.

Being such a healthful article for the household, it is a good seller—push it, keep it at your right hand—always

E. W. GILLETT COMPANY LIMITED
TORONTO

VARNISH JAPANS

For High-Class Varnishes
and Japans, address:

**THE
CANADA
PAINT
COMPANY
LIMITED**

Manufacturers of

VARNISH AND JAPANS

For ALL Purposes.

**THE
CANADA
PAINT
COMPANY
LIMITED**



conditions higher prices are likely to rule in the near future.

Petroleum.

Refined—The demand at present is strong as the firms using large supplies are sending in their orders before navigation closes. Home as well as export demand has increased. Indications point to a brisk trade during the next two weeks. Prices continue unchanged. We quote: Refined Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 18 1-2c ex warehouse.

Crude—Conditions on market are unchanged. Prices unaltered. We quote: Pennsylvania, \$1.56; Corning, \$1.41; Newcastle, \$1.43; North Lima, \$1.05; Tiona, \$1.71; South Lima, \$1; Whitehouse, \$1; Somerset, 51c; Indiana, \$1; Canadian, \$1.53.

Turpentine in New York.

Dealers continue to report a slow market for spirits of turpentine, with no buying in a large way and trade in general holding off. Owing to dulness of business and lower prices recently reported from Savannah, prices yielded and are now at 54 1-2c for machines and 54c for oils.

BUILDING PERMITS.

TORONTO.

C. R. Rundle, dwelling, No. 25 Searth road, \$6,000.

J. J. Walsh, dwelling, No. 1372 King street west, \$4,500.

Robert Hewitt, dwellings Nos. 26 and 28 Fuller street, \$3,000.

John McLeod, dwellings, Nos. 6 and 8 Rosebery avenue, \$6,000.

W. C. Chisholm, dwellings os. 2 and 4 Delaware avenue, \$6,000.

A. B. Crosby, dwelling, No. 136 west Roxborough street, \$4,500.

F. Julian, dwellings near Wright on MacDonnell avenue, \$1,100.

Joseph Estate, warehouse and office, No. 76 Bay street, \$16,000.

Geo. Phillips, dwellings, Nos. 570, 572, 582, 584 Huron street, \$18,000.

H. S. Alexander, dwellings, Nos. 43 and 45 Chicora avenue, \$5,800.

G. S. Ramson, dwellings, near Wilton avenue on Mutual street, \$6,000.

T. J. Madill, dwellings near Yonge street on Walker avenue, \$5,000.

Jos. Bryant, dwellings, near College street on Montrose avenue, \$3,200.

F. H. Squires, dwellings, near Herick street on Euclid avenue, \$3,800.

Wm. Saul, dwelling, near Hazelton avenue on Davenport road, \$2,000.

W. A. Elliott, dwellings, near Sor-auren avnue, on Fern avenue, \$2,400.

R. Brundle, dwellings, near Bloor street and Ossington avenue, \$1,500.

J. F. Hass, dwelling, near College street on St. Clarens avenue, \$6,000.

M. Shuttleworth, dwellings, near College street on Bathurst street, \$4,500.

H. P. Howard, dwelling, near Ronces-valles avenue, on Pearson avenue, \$2,000.

J. H. Vivian, warehouse, near Robinson street on Bellwoods avenue, \$3,000.

Benjamin Pryce, dwellings, near Har-rison street on Ossington avenue, \$2,200.

Cecil Horrocks, dwellings, near Par-liament street on Aberdeen avenue, \$3,000.

Consumers' Gas Co., storage shed near Parliament street on Front street east, \$3,000.

Monetary Times Co., addition only, on corner of Church and Court streets, \$2,200.

H. H. Suydam dwellings near Cot-tingham street on Rathnally avenue, \$5,400.

John Kee and Jos. Swain, dwellings near Birtle avenue on Dundas street, \$10,000.

Herbert Galbraith, one pair of dwell-ings, near Bloor street on Delaware ave-nue, \$2,400.

J. J. Walsh, dwellings and stores on northeast corner of Fuller street and Queen street west, \$14,000.

OTTAWA.

M. Featherstone, Percy street, one house, \$1,300.

A. Boehmer, Sparks street, alterations on hotel, \$400.

J. G. York, Florence street, double dwelling, \$2,600.

Geo. Tomlinson, McLeod street, one dwelling, \$2,400.

Jas. E. Wilson, Lisgar street, one dwelling, \$2,800.

John D. Robertson, Fourth avenue, one house, \$1,600.

Thos. Lawson, Wellington street, one pattern shop, \$1,500.

Jas. E. Wilson, Lisgar street, one dwelling, \$4,200.

LONDON.

E. R. Emerson, Peter street, one dwelling.

Smith & Pearson, Hamilton road, one frame barn.



OLD friends are good friends. We count among our customers scores and scores of good friends—old friends. They placed their faith in our Paints, Oils, and Varnishes and allied lines, and we have held their business without a break.

Granite Floor Paint

is a line that is good from every point of view. It does the best work possible. It is honest through and through. Ever have trouble with Floor Paints? Try ours; catalogue on request.

STANDARD PAINT & VARNISH CO., Limited, WINDSOR, CANADA

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

ABOUT GLUES

What kinds do you handle?

Are you and your customers satisfied? Perhaps we can

give you a better article at a fairer figure. Our SCOTCH GLUES will be found of exceptional strength, and equal to many glues for which much higher prices are charged. Let us send samples.

GROVE CHEMICAL CO. Ltd, Appley Bridge, Lancashire, Eng.

TRADE WITH ENGLAND

Every Canadian who wishes to trade successfully with the Old Country should read

"Commercial Intelligence"

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$4.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO

MONTREAL

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"ISLAND CITY" GOLD PAINT

for decorative work is a winner these days. Are you getting your share of the profits? How is your stock?

P. D. DODS & CO., Montreal Toronto Vancouver

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Nov. 3, 1904.

HHEATING and plumbing goods continue to move with an activity apparently unaffected by the conditions governing other lines. Business is extremely good. Heating apparatus is still being installed and called for in large quantities. Plumbers throughout the country especially at distant points, are stocking up for the Winter before

the advance in freight rates. The difference for eastern buyers on some heavy goods, amounts to as much as 10 per cent. of the initial value, which is thus saved by having the goods carried by boat. Lead pipe continues firm and in splendid demand. There is still some cutting being done on iron pipe, while large quantities are being shipped and manufacturers are very busily engaged in keeping up with the demand.

Range Boilers—The activity experienced for some weeks past still continues and a large demand is reported. Quotations are as follows: Iron clad 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—There has been no advance in lead pipe, although the lead market is very firm. There is an especially good demand, in common with other plumbing goods. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—There is a quieter market this week and the demand is considerably less than it has been for some time past. Discounts quoted two weeks ago still hold. We quote: Soil pipe, standard, 50 per cent and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—No change is noted in this line, which is fairly active. Discounts quoted on all sizes of nipples up to six inch, 67 1-2 to 70 per cent.

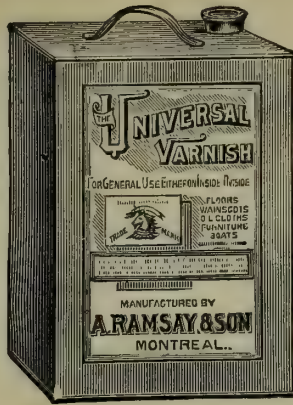
Iron Pipe—Manufacturers are busily engaged in keeping up with the demand and as yet have scarcely accomplished this. There is generally a shortage at this time of year, to which this season is no exception. The market is somewhat firmer and less cutting is reported. Our quotations are as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55.

Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Nov. 4, 1904.

TRADE locally has never been equalled before, a circumstance due not only to the disastrous fire of this Spring but also in a large measure to the builders' strike which occurred quite recently. Even if the strike had not occurred the demand would have been strong and steady, but as a result of a prolonged idleness of some six weeks or more, everybody interested in building has suddenly become aware of the fact that if they do not get their heating and plumbing done at once they will not get it done at all. This has resulted in a sudden and substantial increase in the demand, leaving manufacturers and dealers in a rather precarious condition as regards supplies. However, as the saying is, it is better to be too busy than idle, and all local dealers are quite satisfied with the amount of business transacted this season. There is a rumor current that the manufacturers of iron pipe at Guelph and Montreal are trying to arrange a standard price for all sizes. Owing to this, an advance in prices is expected. The building trade of the Northwest has increased 50 per cent. and consequently the demand for plumbing and heating has increased largely



A varnish trade can be made clean and profitable if you have something interesting.

A customer will pay a price for a really good article, but will haggle over something that is doubtful.

A customer must pay the price if he wants good varnish.

Ramsay's Universal Varnish

is a splendid standard. It is a high-grade excellent varnish for all classes of work. Every can contains a coupon which gives the consumer a rebate. We pay this—not you.

This interests your customer.

Let us send you a booklet.

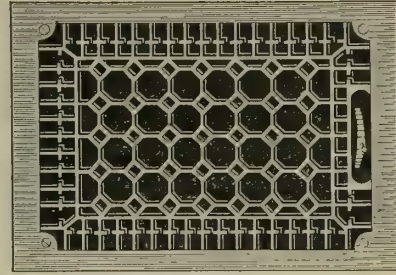
A. RAMSAY & SON COMPANY

Established 1842.

MONTREAL

Paint Makers.

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



The Standard Ideal Sanitary Co. Limited

MANUFACTURERS OF

Porcelain Enamel Bath Tubs Lavatories Sinks Slop Hoppers

"MADE IN CANADA."

Porcelain Enamel Bath Tubs,

Porcelain Enamel Sinks,

Porcelain Enamel Lavatories,

Porcelain Enamel Lipped and Plain Urinals,

Porcelain Enamel Slop Hoppers,

Porcelain Enamel Factory Wash Sinks.

THE ONLY MANUFACTURERS OF ENAMELLED WARE IN CANADA

Head Office and Factory:

Port Hope, Ont.

Sales Office:

50 Colborne St., Toronto.

from 25 to 40 per cent. better than last season, when taken on an average, is from 25 to 40 per cent. better than last year.

Lead Pipe—A good trade continues at steady prices. Our quotations are: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—An increase of 5 per cent. is noted in the discount on headers and nipples. Prices are steady. We quote nominally: Malleable fittings 20 per cent for American and 35 per cent. for Canadian; cast iron (standard), 65 per cent.; headers, 60 per cent.; flanged unions, 60 per cent.; malleable bushings, 57 1-2 per cent.; cast iron bushings, 70 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A steady demand continues with the discount unchanged at 15 per cent.

Iron Pipe—Reports state better conditions. The demand increases. Cut

ting in prices still continues although 3-8 in. galvanized has advanced. Our quotations are as follows: Black, 1-4 inch, \$1.97; 3-8 inch, \$2.10; 1-2 in., \$2.28; 3-4 in., \$2.86; 1 in., \$4.10; 1 1-4 in., \$5.62; 1 1-2 in., \$6.72; 2 in., \$8.98. Galvanized, 1-4 in., \$2.80; 3-8 in. \$2.96; 1-2 in., \$3.14; 3-4 in., \$4.01; 1 in., \$5.75; 1 1-4 in., \$7.85; 1 1-2 in., \$9.43; 2 in., \$12.57.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 5 1-2 feet, 2 1-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 2 1-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D, A quality, \$5.40; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

out the interior an area which was fully equal to that of the connecting pipes.

At this time also patterns were made for cast iron fittings—the largest being 2-inch, for there was no use for anything of greater size; pipe of no larger than 2 inch then being made.

In connection with the fittings and valves, Mr. Nason at the same time devised the taper thread for joints, the pitch being then, as now, three quarters of an inch to the foot, and the conical form of the pipe entering the taper hole of a fitting insured by its wedge-like action a perfectly tight joint.

CENTRAL STATION STEAM HEATING.

Some thirty years ago the direct application of steam heating on a large scale was made at Lockport, New York. About 200 houses in the city are heated from a central supply through about three miles of piping, radiating from a boiler house which contains two boilers 16 feet by 5 feet and one boiler 8 feet by 8 feet. These boilers were fired during the winter to a pressure of 35 pounds with a consumption of four tons of anthracite coal in twenty-four hours. The boiler pressure of 35 pounds in winter and 25 pounds in summer maintained through a total length of three miles of piping up to the several points of consumption where there is a cut-off under the control of the consumers. The first 600 feet of mains from the boilers are 4-inch. There are 1,400 feet of 3-inch, 1,500 feet of 2 1/2-inch and 2,000 feet of 2-inch. The supply pipes from these mains to the houses are 1 1/2-inch and within each house 3/4-inch pipes are used.

In addition to the cut-off from the main under the control of the consumer, there is a pressure valve regulated to a 5 pound pressure under the control of the company, and beyond this is an ingeniously constructed meter which indicates not only the total consumption in cubic feet of steam, but also the quantity of steam in each apartment. At each 100 feet of main an expansion valve, like an ordinary piston and socket, is inserted, allowing an expansion in each section of 100 feet of 1 3/4 inches for the heat at 35 pounds pressure. Little or no condensation occurs in the mains. They are covered with a thin layer of asbestos paper next the iron, then a wrapping of Russian felt and finally manilla paper, and the whole is encased in timber bored out three-fourth of an inch larger than the felt covered pipes, and laid along the street like gas pipes.

The distribution of heat in the apartments is by means of radiators consisting of one inch pipes 30 inches long placed vertically either in a circle or as a double row

HEATING BY STEAM OR HOT WATER.*

By ROBERT W. HARRISON, Toronto.

(Continued from last issue.)

THE FIRST USE OF IRON PIPE.

ABOUT this time Mr. Nason conceived the idea of using small pipes 3/4 inch or one-inch diameter for heating by steam, in place of the large cast iron pipes then in use in England and in a few mills in this country. About March 15, 1845, Walworth & Nason contracted to put into the Eastern Exchange Hotel near the East Boston Ferry, the first steam apparatus in the world, using small wrought iron pipe. On Sept. 11, same year, the apparatus was completed and tested, giving entire satisfaction.

In 1846, at the Boston Custom House, a steam apparatus was constructed which deserved special mention as being the first to use a fan blower in connection with an indirect coil. The apparatus was entirely successful and afforded an ample supply of fresh air and heat. In it the exhaust steam from the engine was used for heating as well as live steam, and was in operation for a period of about 30 years.

During the greater part of the time in these several years, when Mr. Nason was not occupied in superintending the erect-

ion of apparatus, he devoted his time to the development of what is now recognized as a standard necessity among steamfitters, viz: the fittings, valves and usual trimmings which are in every-day use. It will be remembered that up to this time all fittings were made of wrought iron and forged by hand. The work was accurate and the fittings were near enough in their inside bore to permit tapping without reaming, but their cost was inordinate. The threads were straight or nearly so. The only means of shutting off portions of circulation were with cocks—the smaller sizes being made of brass and the larger with cast iron bodies and brass plugs, like those of to-day except that they were usually flanged and of the obsolete pattern to be seen in old English prints.

The angle valve had, it is true, been used; but there was no stop which could be put into a straight line of pipe other than the cock, and the well known globe valve was devised by Mr. Nason as a substitute.

Simple as the device appears to-day it was at that time regarded as a most ingenious method of accomplishing the same effect as was attained with the cock—the spherical form of the shell giving through-

*An address delivered before the Toronto Master Plumbers' Association.

THE SECTIONAL IDEA

Is there any sense in having your filing and reference cabinets in every corner of the office? Note the cut. Wouldn't it be better in every way (to say nothing of the convenience) to have everything in one cabinet? Here we have a Cost System, a Commercial Report Section and a Letter Filing Outfit in one snug sectional cabinet. Shall we send our traveller? **Remember our specialty is system making.**



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Put Book 6

Page 48

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THE
Office Specialty Mfg. Co.

LIMITED

Factories, Newmarket.
97 - 103 Wellington St. West

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and connected at the top and bottom, with an outlet pipe for the condensed water which escapes at a temperature a little below boiling and is sufficient for all the domestic purposes of the house, or it may be used as accessory heating power for horticultural and other purposes. The laid on steam is also used for cooking purposes for boiling or even for baking. As in the case of gas supply the steam supply company lay their pipes up to the houses, the consumer paying for all internal pipes, fittings and radiators. In a moderately-sized 8-roomed house the expense of these amounts to \$150, and in larger houses with costlier fittings to \$500.

It would be impossible to trace the growth and progress of the heating trade up to the present day with its numerous steam and hot water boilers, radiators, valves etc., and the numerous systems of steam and hot water heating, increasing as they are in number almost every day. Suffice it to say that we have the radiator patented in the United States in

March, 1862, and I am sure it will be pleasant news to the radiator manufacturers of to-day to know that the trade price for a period of about 10 years was \$1.75 per square foot.

FIRST HOT WATER WORK IN CANADA.

It has always been conceded that Montreal was the birthplace of hot water heating in Canada. Beginning about 1855 and for a period of about 10 years we find hot water systems being constructed very similar to the Perkins system, as before mentioned. In the year 1864 we find the first cast iron boiler manufactured in Canada by Messrs Rogers & King, of Montreal, namely, the Beehive, and in that year a hot water system was installed in the Montreal General Hospital, using a Beehive boiler and pipe coils for radiation. Ten years later we find the Spence sectional boiler in use and in another ten years the Champion sectional, and in 1886 the round sectional Daisy boiler, which type of boiler is in general use to-day. The city of Ottawa claims to have put in the first

boiler of this pattern made. Montreal until quite recently has not taken very kindly to steam heating, preferring hot water even to the extent of heating very large buildings with same, and the writer well remembers the first large one pipe steam job constructed in the Canada Life building by the Bennett & Wright Co., and how the fitters there ridiculed the idea of such a system working satisfactorily.

Toronto, on the contrary, has always been favorable to steam heating, and the most reliable information obtainable places the date as 1854 when the first steam heating plant was constructed in the old Rossin House on King Street, by Messrs Thomson & Keith, founders of the present Keith & Fitzsimons Co. Other firms engaged in the business at that time were Messrs Cummings & Wells, Mr. Geo. Harding and Mr. John Wright. Three years later, in 1857, we find Mr. John Ritchie established in business, and it may be interesting to note that Mr. Jas. Bennett and Mr. Joseph Wright, who were

PIPE THAT IS PIPE.

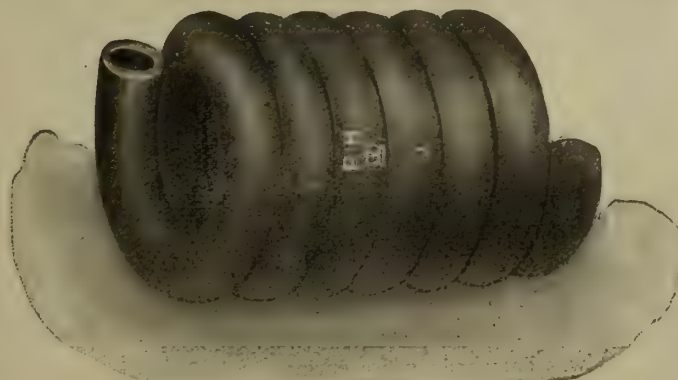
THIS IS OUR BRAND

P-H



You Want It.

See that You Get It.



BLACK AND GALVANIZED.

THIS IS OUR TAG.



TAKE NO OTHER.

PAGE-HERSEY IRON AND TUBE CO., LIMITED, GUELPH, CANADA

THE FISHER TUBE SKATE



THE LIGHTEST, STRONGEST,
EASIEST RUNNING AND
PRETTIEST SKATE
IN THE WORLD.

Dealers:

It will pay you to handle the Fisher Tube Skate, there is a demand for them.

The large makers of ordinary skates are now compelled to make Tube Skates. It will take them years to get to our standard. Tube skates are not made like ordinary skates.

Write to-day for Catalogue and Prices.

The A. D. FISHER CO., Limited
34 Richmond Street East
TORONTO

Nott Hockey Skate



WON'T BREAK.
WON'T PULL APART

Of what other tube skate can this be said?

A Nott Tube Skate weighs 25 % less than any other tube skate on the market. Think of the difference to the skater between a 9 oz. skate and 12 oz. skate.

No solder about Nott skates—All parts are brazed.

Hockey players won't have any other skate once they see a Nott model.

They Retail at \$5.00

Send for pamphlet.

Order from your jobber.

W. G. Nott & Co.

Sole Makers

205 1/2 Yonge St.

TORONTO

the founders of the Bennett & Wright Co. in 1875, were, previous to starting in business, employed by Mr. John Ritchie.

In 1856 we see the firm of Morrison & McGuire established on King Street, on the site of the present W. J. McGuire & Co's premises, and after several years of success Mr. Jas. Morrison retiring to devote his whole time and energy to his present brass manufacturing plant. Among others the following are a few of the principal heating plants constructed by the pioneers in the business: Osgoode Hall, Toronto University, Central Prison and Shaftesbury Hall.

Hot water heating in Toronto apparently commenced about 1860 and if my information be correct was first used for greenhouse heating, being constructed with 4-inch cast iron circulating pipes. This style of heating for greenhouses was favorably thought of and extensively used, in fact up to about ten years ago.

Referring to our own manufacturers we find the Gurney Co. manufacturing the Crescent cast iron boiler in 1873, the Nason pipe radiator in 1875 and the Bundy hot water and steam radiators in 1878, and in 1881 the Geyser boiler, and in 1891 the present style Oxford boiler. In 1884 the Toronto Radiator Co., now the Dominion, commenced the manufacture of cast iron radiators.

Building Notes.

Carp, Ont., is to have a new school-house.

Wm. Gray, it is said, will erect a factory in London, Ont.

Smith-Fraser, of Stellarton, is erecting a large warehouse.

The Quebec and Lake St. John Railway will erect a new station at Limon.

The London postoffice is to be enlarged, the Dominion Government having granted \$20,000 for the purpose.

The new electric light plant at Marmora, Ont., is being pushed forward with great rapidity.

Saunders, Lorie & Co., diamond setters and engravers, are building a factory at the corner of Simcoe and Adelaide streets, Toronto.

A sum probably between \$10,000 and \$15,000 is involved in the tenders for the excavation and masonry work for the Broadview avenue school of Toronto.

The Electrical Development Co., of Niagara Falls, have, through E. J. Lennox, architect, awarded contracts aggregating \$120,000 for a new subsidiary station.

The Dufferin block in Winnipeg, which was damaged by fire during the Bulman-Ashdown fire, will be remodelled. J. H. G. Russell, architect, has completed plans and has invited tenders for the immediate prosecution of the work.

Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Philip D. Johnston; 65 full-page plates and 2 folding plates, with full text and 134 illustrations; cloth.....\$2.00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire buildings for bells, alarms, annunciators, and gas lighting from batteries. 55 pages, illustrated; paper, 25c.; cloth.....50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed.....\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages.....25c.

Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for mixing and using cements. 96 pages....\$1.00

Metallurgy of Cast Iron.

By Thos. D. West. Showing processes involved in its treatment, chemically and physically, from the blast furnace, through the foundry, to the testing machine. 627 pages, 153 illustrations....\$3.00

Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and zinc; also tinning gray iron castings....\$2.00

Practical Plating and Polishing.

Best and Most Approved Methods of Preparing and Cleaning all Metals for Electro-Plating and Polishing. 114 pages, illustrated.....80c.

New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as applied to all branches of sheet metal work, 430 pages, 744 illustrations.....\$5.00

Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams, tables, 123 pages, 53 figures.....\$1.00

Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates.....\$1.50

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By Wm. G. Snow. Comprehensive treatise on warming buildings with hot air, with appendix on furnace fittings, 170 pages, 90 illustrations, cloth.....\$1.50

Plumbing Problems.

House drainage and plumbing, 309 pages, 146 illustrations.....\$2.00

Practical Hints on Joint Wiping.

For beginners in plumbing, 66 pages.....25c.

Kitchen Boiler Connections.

A selection of practical letters and articles relating to water backs and range boilers. Fifth edition, enlarged.....\$1.00

Steam and Hot Water Fitters' Text Book.

A book prepared for the Steam and Hot Water Heating Course at the New York Trade School, with supplementary chapters on house heating, specifications and surface estimating, by Thos. E. McNeill. 140 pages; 5 x 7 in.; numerous illustrations; cloth binding.....\$1.00

Easy Lessons in Roof Measurements.

Twelve short lessons on figuring from architects' or scale drawings the amount of material required to cover a given surface in flat, hipped or irregular shaped roofs, by W. Neubecker. 31 pages; 5 1/2 x 8 in.; 12 illustrations; paper cover.....25c.

Enquiries for above books should be sent to

BOOK DEPARTMENT

HARDWARE AND METAL,
Toronto

Have you
tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
78 YORK ST., TORONTO.

FULL STOCK

Salt Glazed Vitrified

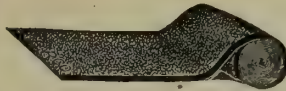


Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

**A PERMANENT
and Handsome Roof.**



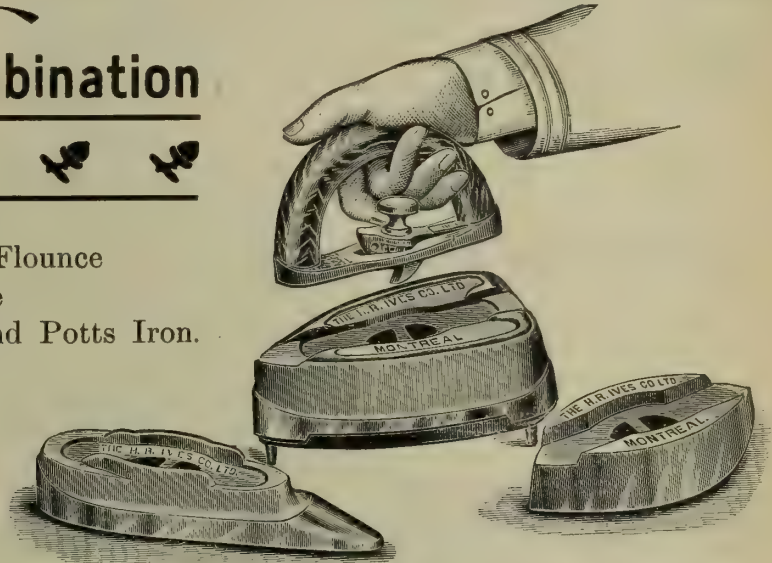
Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - **MONTREAL.**
Sole agents being appointed in each district. Write to-day.

NEW
**Combination
Set**

Pressing, Flounce
and Sleeve
and Potts Iron.



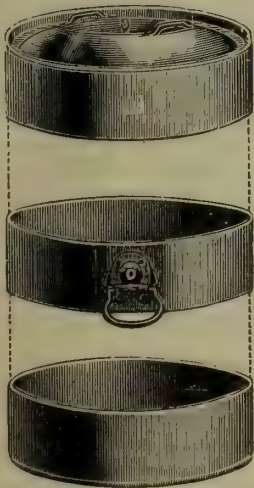
WRITE FOR PRICES

The H. R. IVES CO., Limited, Manufacturers, Montreal

For durability, finish and economy in making up

DAVIDSON'S Broad Hoop, Heavy Roll Rim
Bottom Milk Can Trimmings
are unequalled.

Patent



In Complete Sets

"BROAD HOOP" Pattern—Com-
posed of the following: 1 Broad
Hoop Bottom, 1 Cover, 1 Centre
Hoop 6 inches wide, 20 gauge,
1 Broad Top Hoop, 1 pair Cover
Handles, 1 pair Side Handles.

Popular Features

Our Broad Hoop Bottom is built to defy hard usage and has all the advantages of a seam-
less botto without the strain that spinning
entails.

Bottoms can be sweated in, using little solder.

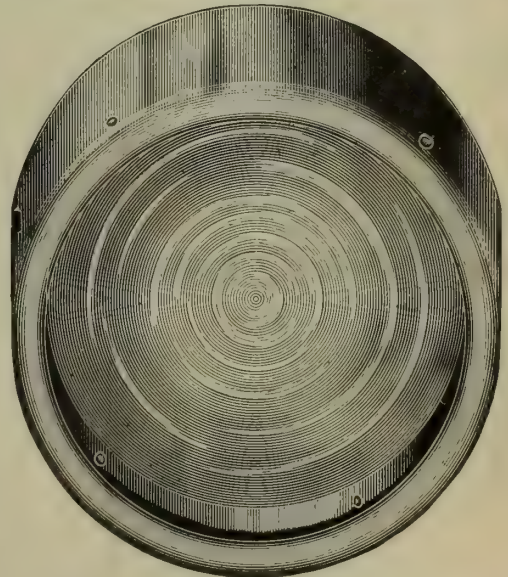
Bottoms are concave, draining to the centre, and
are therefore easy to wash out, and will not
corrode.

Heavy Rolled Edges makes our Patent Bottoms
doubly durable and factory and waggon floor
protectors.

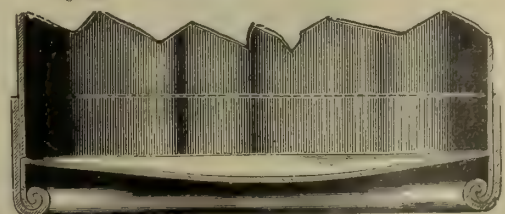
Top Bands are **Shouldered** and all bands have
retinned edges.

We can also supply best quality]
Tinned Iron at lowest market prices.

The Thos. Davidson Mfg. Co. Ltd.
MONTREAL



See how the Outer Rim and Inner are rolled in and
Riveted to Bottom Hoop as well as being rolled
together.





A household necessity
"SOLARINE"
 Every hardware dealer
 should sell Solarine Metal Pol-
 ish, the polish of quality.
 Ontario Agent
H. F. FALKNER,
 60 George St., TORONTO

Matchless

for quick, clean work. An ideal
 polish—the best you ever
 had offered you.

York Metal Polish

Liquid or Paste.

SEND FOR FREE SAMPLE.



**ANGLO-CANADIAN
 SUPPLY COMPANY,**
 29 CHURCH ST. :: TORONTO.

OAKEY'S 'WELLINGTON' KNIFE POLISH

JOHN OAKEY & SONS, LIMITED
 MANUFACTURERS OF
 Emery, Black Lead, Emery, Glass and
 Flint Cloths and Papers, etc.
Wellington Mills, London, England

Agent :
JOHN FORMAN, 644 Craig Street
MONTREAL.

Cooper's Improved Patent One-Piece Stovepipe Elbows.



The Heaviest and Best Elbow on the mar-
 ket. Measures 23 inches long at the back.
 Send in for sample dozen.
 Polished or Common.

E. T. WRIGHT & CO.

Manufacturers and Sole Patentees,
Hamilton and Montreal.

STOVES AND TINWARE.

The Aggressive Stove Dealer.

It might seem a little risky for a trav-
 eling stove salesman to find any
 fault with his customers, says
 "Salesman" in Metal Worker, but an
 experience of years on the road, with
 close observation and comparison of
 methods of men who handle stoves in
 different places, qualifies one to point out
 the shortcomings of some dealers, so
 that they may overcome them, and to
 mention the aggressive methods of other
 dealers, so that their example can be fol-
 lowed and corresponding benefits be de-
 rived. It is unfortunate, although it is
 true, that in a majority of instances the
 stove trade lasts for only a few months,
 and the stove dealer has to devote his
 attention to other lines of trade for a
 good portion of the time. In consequence
 he does not bring to this branch of his
 business the intelligent management that
 would come from undivided attention to
 it. He is likely to be somewhat behind
 the market, so far as the popular goods
 are concerned. He is far more apt to
 keep his store in—shall I say it?—a
 slovenly manner. His displays of stoves
 will perhaps be somewhat dingy or show
 too clearly that they are a side issue
 and not even for a season a leading fea-
 tor in his trade. Not infrequently the
 various parts cannot be readily found
 when an attempt is made to show the
 stove to a customer. Neither are the
 assistants which he employs as convers-
 ant with the stoves he sells and their spe-
 cial features as is absolutely essential
 for a salesman in order to make sales
 in these times of reading people and
 competition from department stores,
 furniture houses and catalogue concerns.

It is but human nature for the man
 or woman who desires to buy a stove
 and who has read circulars and adver-
 tising matter, catalogues, etc., to expect
 to find at the stove store far better in-
 formation and better explanations than
 can be had from the literature that has
 stimulated the decision to purchase a
 stove. Too many stove dealers fail to
 realize this condition and to make the
 necessary provisions to meet it. It is
 not too much to expect of a stove dealer
 that he should drill his assistants in the

methods of selling and explaining the
 goods he has on his sample floors.

THE USE OF CIRCULARS.

The aggressive stove dealer is accus-
 tomed to insist that the manufacturer
 shall furnish him with good circulars,
 illustrating and describing the stoves
 that he sells. He will have his name
 printed on these and distribute them
 every week or two through the town;
 and if it is a country town, where farm-
 ers drive in, he will be sure to see that
 each one of these wagons has a circular
 before the owner leaves town. He fol-
 lows up this kind of a campaign by
 keeping his stoves freshly blacked, the
 nickel brightly shined, and the stoves
 which he has to sell occupying such a
 position in his store that those who
 enter cannot help seeing them and be-
 ing attracted by their fresh appearance.
 He does not consider that it is too much
 trouble to give to the man who comes
 in to buy something else an impressive
 explanation of the superior merit of the
 leader he is pushing, so that the inform-
 ation may be carried along where it will
 eventually do good. There is a differ-
 ence between the parrot-talking sales-
 man and the interesting talking sales-
 man who is thoroughly imbued with the
 idea that he has a good thing to sell and
 the other fellow ought to know it.

The stove dealer himself must be a
 man of spirit and enterprise to take the
 lead in planning his course of action,
 and then to lend his assistance all along
 the line to inspire those he hires to do
 their best work for him. All should be
 impressed with the idea that the season
 for selling stoves does not last any too
 long and that the hay must be made
 while the sun is shining. The dealer
 must impress his help with the fact that
 nothing is too much trouble that will
 give the least gratification to the casual
 inquirer or possible customer. Informa-
 tion about his goods will be profitable
 if it is in the possession of every one
 of his fellow townsmen.

EXPERIENCE AN ASSET.

It is not enough to know the stove or
 range as an article only; the help should
 all be conversant with the conditions
 under which it will do its best work, and
 the causes of troubles when they arise,

THE "GOOD CHEER"

Art Base Burner

We have put on

**MORE MEN
MORE PATTERNS
MORE FLASKS**

so as to keep pace with the
unprecedented demand for
this popular Heater.

We can take care of your
orders at present, so send
them on.

There is nothing
"just as good"
made yet
—nor likely to be.

IT HAS
**NO
FAULTS**

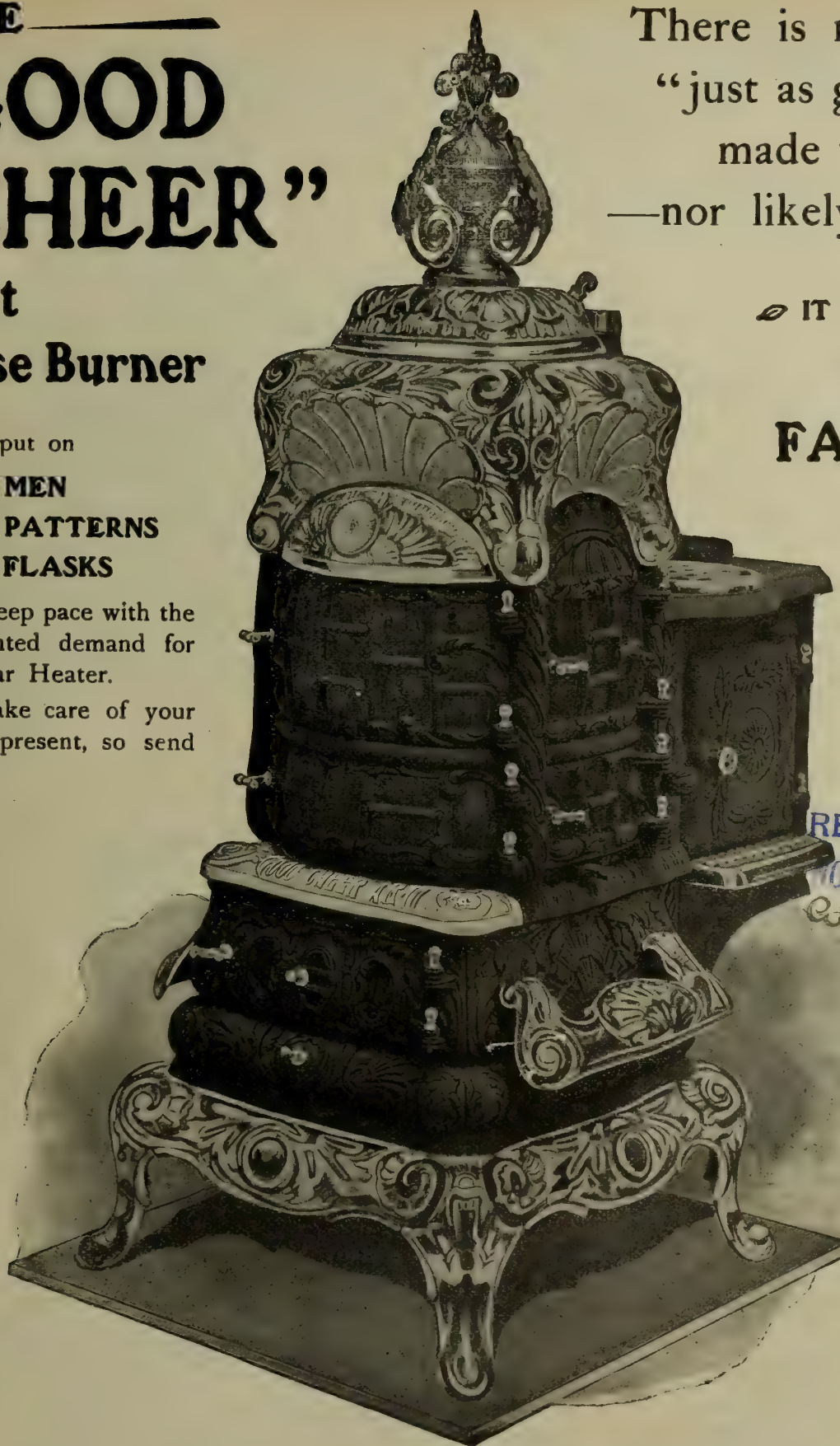
Firepot removable
without turning a
single bolt.

Has Duplex Grate
and large ash pan.

Every stove a
Double Heater.

Has Steel Oven.

With or without
oven.



RETURNED

NOV 14 1904

Cut Book 26

Page 71

over

The JAMES STEWART MFG. CO., Limited
Woodstock, Ont. and Winnipeg, Man.

so that remedies can be suggested and the good will of the customer preserved, even when exasperating annoyances have been experienced. The old idea of taking a stove back if it would not bake and sending another around has cost many a stove dealer a lot of money. The conditions that bring these troubles should be anticipated, and if they are likely to be met the customer should be informed of them and efforts should be made to apply such remedies as will overcome them.

The aggressive stove dealer is familiar with these facts and conducts his campaign for an increased trade along the lines indicated. When a stove fails to bake he does not consider the time wasted or the trouble too great to go to the house and seek out the cause and apply the necessary remedies. This course inspires confidence, not only in the mind of his customer, but of those who hear the neighborhood gossip of what he has done, and it tends to extend his prestige to the end of future business.

Unfortunately, however, far too many men only handle stoves for a comparatively short period of the year and do not study the cause and effect to a sufficient extent to be able to overcome many little troubles which provoke complaints and yet are simple matters to remedy in the hands of a competent man. The season is now advancing and it is especially desirable that the display of stoves be kept in its most attractive appearance, in order to make belated sales and to dispose of the stock to such an extent that it will be no hardship to carry over the few that remain when the season closes. The intelligent man, whether he has a large stove trade or a small one, will keep his stock looking fresh, and will be talking about it in an interesting manner whenever opportunity offers until after the Christmas holidays. Those who take up these few suggestions of a man who has spent many years on the road will, I am convinced, add substantially to the sales and profits of their stove business.

OBTAINING THE RADIATION.

TO obtain radiation in a wooden dwelling with inside walls plastered, says the Plumbers' Trade Journal, first find the dimensions of rooms to be heated, then the areas in square feet in the windows and outside doors, the doors being figured as if they were so much glass surface.

Next find the area in square feet of exposed wall surface, from which amount subtract the area of glass surface

as found above, the result obtained being the net wall surface. Reduce the wall surface to its equivalent in glass surface by dividing the net amount of wall exposure by 10 if the wall is 8 or 10 inches thick, by 15 if from 12 to 26 inches, and by 20 if from 26 to 38 inches thick. This added to the glass exposure, as found above, gives the equivalent in glass—of the wall and glass exposures combined.

Multiply this total by 75, the cubic feet of air cooled by a square foot of glass in one hour. This result gives the number of cubic feet of air to be heated in order to counterbalance the cooling effect of glass and wall exposure.

The cubic feet of air in the room added to the above will give the total amount of air to be heated. The usual requirement is a temperature of 70 deg. during zero weather.

To meet this requirement the number of feet of radiation necessary can be found by multiplying the cubic feet of air to be heated by the decimals as below. For hot water—for temperature of water in radiators 160 deg., multiply by .0092; for temperature of water in radiators 170 deg., multiply by .0081; for temperature of water in radiators 180 deg., multiply by .0072; for steam multiply by .0055; for temperatures below zero to the amount of radiation as obtained above, add one per cent. for each degree.

OUR VAST COAL AREAS.

DR. A. SIMON, of London, Eng., a well known mining engineer, called in consultation frequently in large coal mining operations, will make the most thorough examination possible of all Western Canada mines, especially those at Nanaimo and in the Crow's Nest Pass. Returning east, he will visit the coal mines in Nova Scotia and the new mines in Cape Breton.

"My object is a three-fold one," says Dr. Simon. "I want to observe the conditions under which miners in Canadian mines live, to examine new labor-saving machinery, and to determine what quantities and what quality of coal is obtainable in various parts of Canada."

"You have not yet learned anything regarding the coal deposits of Canada?" was asked.

"Nothing except that they are very vast—that they are almost inexhaustible," was the reply. "The knowledge of the great coal fields of Western Canada has only recently been communicated to the world, and even at the present time it is very far from being accurately known how much coal there is and what is more important, of what quality it is.

It is certain, however, that the deposit is of very great value and that it will be of the utmost importance in the future development of the commercial interests of the west.

"I am not even sure whether a true anthracite is found in Western Canada, although I have been always informed that there is much anthracite there. A true anthracite is one which contains at least 80 per cent. of carbon—and a fine quality will contain from 94 to 96 per cent. of carbon. Bituminous coal is undoubtedly found in merchantable quantities and will furnish heat and all other necessities for which coal is used for countless years to come. I noticed in Scotland that this species of coal was spoken of as parrot coal, said to be so named from its crackling sound when burning.

"The varieties of coal which we receive in London are innumerable. We have classified about seventy varieties of bituminous coal alone, many of these being found throughout England and Scotland."

AN AMUSING APPLICATION.

FOLLOWING is an extract from a letter received by a Montreal firm from one of its country customers applying for a situation as traveler: Dear People,

I wish to ask By This Note If their would be an Opening In your Firm To get on the Road by Spring off 1905. I Feal I aught to be able to do some thing In the ———— Business By this time, as I Have been In the ———— Business For Over Twelve years doing Business For myself, and as it never suited my Health very well and apparently Longer, the Worse. I Have now Desided to do some thing Else that I may get More ready Sirculation, as I think I would Like travelling very well. Married, One of a Family. You may Remember of Me, as I was In your Place two years ago.

If convenient you would oblige By Letting Me know If there would Be any chance.

I can give you Refference.

Yours Truly
(Signed)

The J. I. Case Thresher Co. will build a branch factory at Fort William, to meet the requirements of the Canadian trade. The works will open with 400 employees.



The Grand Idea Line of Ranges

is a good thing for you to have. If you want something in the range world that is a little better finished and which will give more satisfactory results than the other fellow's, then it's up to you to handle the Grand Idea.

We would be much pleased to receive your next order—not the one after that, or the one you expect to send us sometime.

Make up your mind right now that the next order for Ranges goes to the Guelph Foundry Co.

We are in a position to ship Ranges the day your order reaches us.

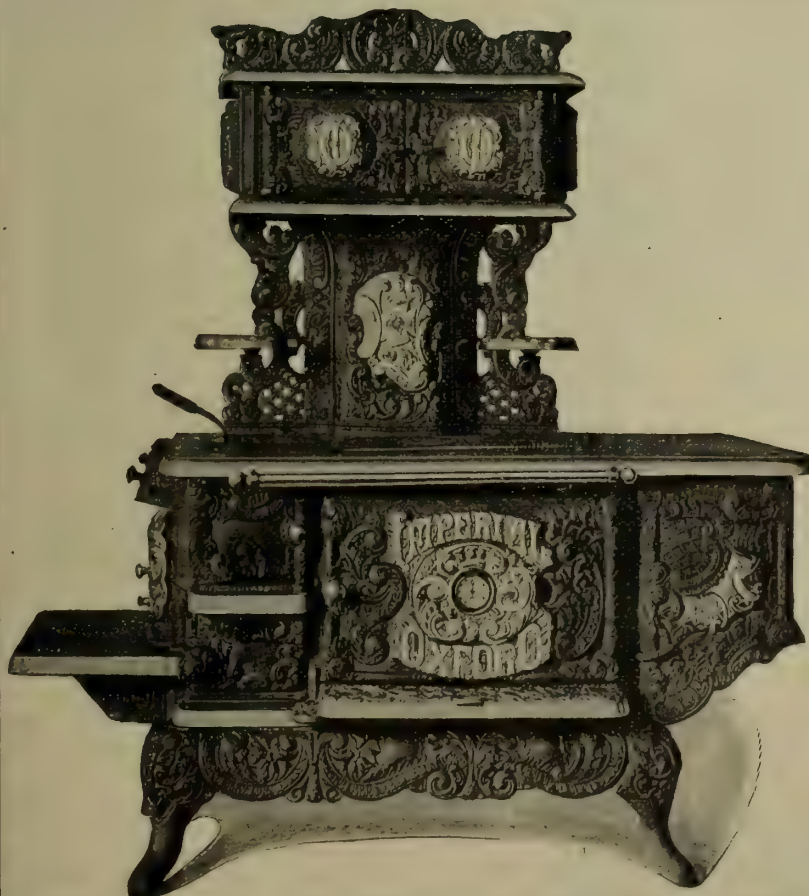
Afterwards, we will expect to hear from you pretty regularly.

The **GRAND IDEA RANGE** is made in four sizes and sixteen styles.

BE WISE—Get next to the Grand Idea—the Range that never fails.

GUELPH FOUNDRY CO., LIMITED
GUELPH, Ont.

WESTERN REPRESENTATIVES—
MESSRS. E. G. LOW & CO., Market St., Winnipeg



In the Imperial Oxford Range we have produced a cooking range that best meets the requirements of Canadian households. Its steady increase in popular favor since it was placed on the market proves this. If you were sales agent for the

Imperial Oxford Range

in your district you would better appreciate this increase

WRITE FOR PARTICULARS.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copy-rights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

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Warren White Sulphur Springs,
Totten P.O., Virginia.

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish
Chemical and Drysaltory Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.

19 LUDGATE HILL - LONDON, ENG.

Order a stock of

"Windmill Best" Galvanized Sheets

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, - Montreal

**DON'T INVITE TROUBLE**

By Buying Imitation FIRE, Water, Dust and Air-Proof SKYLIGHTS **BUY THE GENUINE.** Our pamphlet will tell you about "OUR IMPROVED."

Manufacturers and Contractors
of

Metal Fireproof Windows CORRUGATED IRON

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

A. B. ORMSBY LIMITED,

Cor. Queen and George Streets,
TORONTO, ONT.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

AT the annual meeting of the shareholders of the Ontario Portland Cement Co., Brantford, last Saturday, a highly satisfactory report was presented. The old directors, W. S. Wisner, A. A. Bixel, H. Cockshutt, E. L. Goold and W. G. Elliott were unanimously re-elected. At a subsequent meeting of the directors the following officers were elected: E. L. Goold, president; W. S. Wisner, vice-president; W. G. Elliott, managing director; and E. D. Taylor, secretary.

The McClary Mfg. Co., London, announce that they intend to make extensive additions to their east end plant. A warehouse 240x100 is planned at the northeast corner of Adelaide and Trafalgar streets; also an addition to the moulding shop on William street. The number of employes will be increased between 50 and 60 per cent.

NOTES.

Bayfield, Ontario, has voted to loan Alexander Mustard \$1,500 to rebuild his sawmill.

The Nipissing Lumber Co., Limited, have increased their capital stock from \$40,000 to \$125,000.

The Smith Grist Mill at Simcoe was destroyed by fire on the night of Oct. 26, with all its contents.

The North American Saw Co. of Philadelphia will open a branch factory on Lombard street, Toronto.

The St. Catharines & Niagara Power and Fuel Co., Limited, have increased their capital stock from \$40,000 to \$100,000.

Fire completely destroyed Mann's planing mills at Peterboro on Monday; loss \$8,000. The adjoining box factory was not damaged.

The firm of Walter Woods & Co., broom manufacturers of 94 Merrick street, Hamilton, suffered from fire on Saturday night, Oct. 29.

The Toronto Automobile Co. assigned on October 31. This firm claims to have been the first to place a Canadian-made machine on the market.

The carriage manufacturing business of Crothers, Henderson & Wilson, St. John, has been sold to Thomas Graham, Fred. Cunningham and James Naves.

The Ogden Steam Rotary Sawmill at Midgie, N. B., was burned to the ground early Sunday morning, Oct. 23. The loss is estimated at \$3,000; insurance \$1,000.

John C. Hay and Hay Bros. have taken possession of the foundry property

recently purchased by them from Gilli & Martin, Listowel, and will conduct the business under the name of the Hay Foundry, Limited, Listowel, Ont.

COMPANIES INCORPORATED.

The Hay Foundry, Limited, Listowel; capital, \$40,000; purpose, to manufacture and sell all kinds of iron work and machinery. The directors are: J. C. Hay, F. W. Hay and J. N. Hay, all of Listowel.

The Rosebank Lumber Co., Limited, Rosebank, N. B.; capital, \$75,000; purpose, to erect a large sawmill and manufacture articles. The directors are: O. W. Norden, K. Norden, A. W. Sundon, P. C. Waern and C. F. Neisson, all of Rosebank.

The Dominion Natural Gas Co., Limited, Hamilton; capital, \$500,000; purpose, to manufacture gas for heat and light, also to produce, refine and sell petroleum oil. The directors are: W. J. Aikens, H. Cockshutt, E. L. Cockshutt, J. S. Hamilton, and E. Sweet, all of Brantford.

The Peterboro Shovel & Tool Co., Limited, Peterboro; capital, \$50,000; purpose, to manufacture shovels, spades, tools and implements, etc. The directors are: T. Fortye, A. L. Sykes, A. Elliott, H. LeBrun, W. H. Hill, F. J. Jameson, R. H. Fortye, all of Peterboro.

The Stewart Straw Cutter Mfg. Co., Limited, Toronto; capital, \$100,000; purpose, to manufacture and deal in threshing separators and straw cutters. The directors are: D. A. Stewart, Molesworth; D. Lamont, W. E. Rothwell, T. W. Murray, all of Toronto; and S. J. Stevenson, Listowel.

The Portland Cement Co., Limited, of Manitoba; head office at Winnipeg; capital, \$1,000,000; purpose, to carry on operations in Springfield, with head office at Winnipeg. The directors are: D. A. Keizer, C. E.; T. C. Dougherty, R. R. Sutherland, A. Wright, C. J. Jamieson, all of Winnipeg, and D. W. Shunk of Ste. Anne.

The Algoma Power Co., Limited, Berlin; capital, \$100,000; purpose, to construct, maintain, complete and operate works for the production, sale and distribution of electricity for the purpose of light, heat and power, and with incidental and subsidiary powers. The directors are: D. B. Detweiler, O. Kinzie, N. B. Detwiler and C. K. Hagedorn; Berlin; and D. W. Albright, Preston.

**WORK AND
PRICES
RIGHT**

GALVANIZING ONT.
WIND

**ENGINE & PUMP CO.,
TORONTO, ONT. LIMITED.**

The Hanover Portland Cement Co., Limited
HANOVER, ONTARIO.

Manufacturers of **"Saugeen Brand"**
the Celebrated **OF PORTLAND CEMENT.**

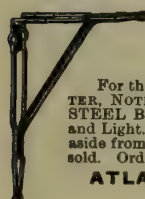
Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially
designed for export With or without "Emlyn"
Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— **Emlyn Engineering Works**
"Machinery," Newport. **NEWPORT, MON., ENGLAND**



Will Hold Up a Shelf!

That's what a shelf bracket is for.

For this purpose there can be NOTHING BET-
TER, NOTHING CHEAPER than the **BRADLEY
STEEL BRACKET.** It is well Japanned, Strong
and Light. The saving in freight is a good profit,
aside from the lower price at which the goods are
sold. Order direct or through your jobber.

ATLAS MFG. CO.,

New Haven, Conn., U.S.A.

**Books for
Hardware Men**

The American Hardware Store.

By R. R. Williams; 576 pages; 6 $\frac{3}{4}$ x 10
inches; 660 illustrations; bound in
cloth **\$3.00**

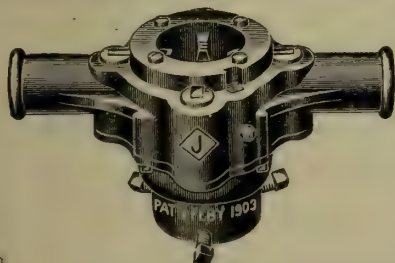
Hardware Store Business Methods.

A series of articles dealing with business
methods in the hardware store, by differ-
ent authors; 227 pages; 5 $\frac{1}{2}$ x 8 inches;
illustrated; cloth binding..... **\$1 00**

Enquiries for above books should
be sent to

**Book Department, HARDWARE AND METAL
TORONTO.**

JARDINE'S PATENT PIPE DIE



Our customers are more than pleased with it.
Clare Bros. & Co., Limited, Preston, Ont., write
us: "Our pipe fitter, who has had fifteen years
experience, says he has never seen a die to
equal it."

A. B. JARDINE & CO.

Mfrs. TAPS and DIES.

HESPELER - - - ONTARIO



This design a guar-
antee of quality

Manilla Paper | Fibre Paper
SMOOTH, TOUGH, BRIGHT, CLEAN **THE TOUGHEST OF THE TOUGH**
ALL SIZES AND WEIGHTS **ALMOST WATERPROOF**

SAMPLES AND PRICES
GLADLY SENT.

CANADA PAPER CO.
TORONTO LIMITED MONTREAL

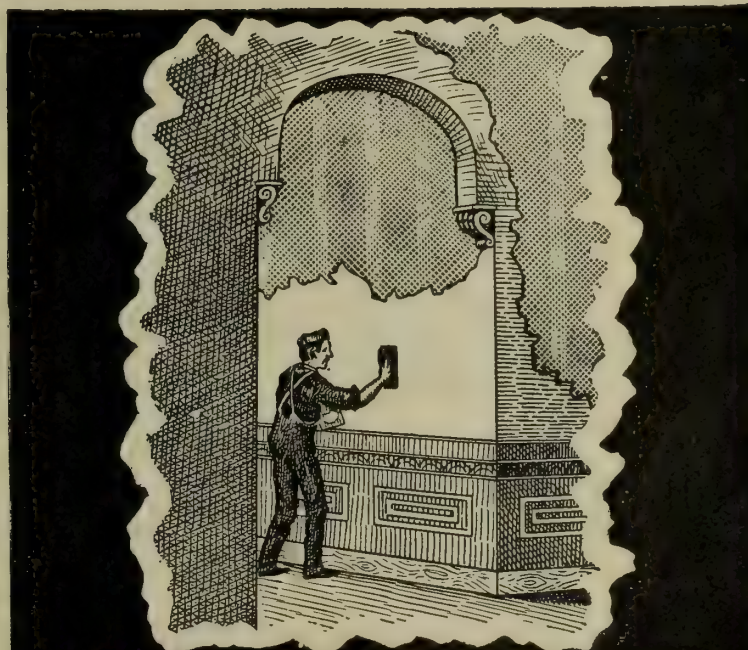
Sell Ash Sifters.

We make one that can be retailed for 25c. and yet leave the dealer a
good profit. All metal and wire. Can't come loose. Will do its work
as if it loved it. No use selling other sifters when

CUTTS' ALL-METAL ASH SIFTER

is on the market. Send for one, two, six, twelve dozen. We fill
all orders.

C. M. CUTTS & CO., Patentees, Toronto Junction, Ont.



Pedlar's "Perfect" Metal Lath

On and after September 1st, 1904, the
prices on "Perfect" Metal Lath will be as
follows:

26 gauge 10c. per square yard.
24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation
and as we have a capacity of ten tons or
12,000 yards per 10 hours, all orders can
be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.**

WESTERN

Incorporated 1851

... ASSURANCE COMPANY.

**FIRE
AND
MARINE**

Head Office
Toronto, Ont.

Capital	-	\$2,000,000.00
Assets, over	- -	3,546,000.00
Annual Income	-	3,678,000.00

HON. GEO. A. COX, President.

J. J. KENNY, Vice-President and Man. Director.

C. C. FOSTER, Secretary.

BRITISH AMERICA ASSURANCE COMP'Y

FIRE AND MARINE.

Incorporated 1833

CASH CAPITAL, \$1,000,000.00.
TOTAL ASSETS, \$2,024,096.02.
LOSSES PAID SINCE ORGANIZATION, \$23,886,005.32.

HEAD OFFICE, - BRITISH AMERICA BUILDING,
Cor. Front and Scott Sts., Toronto.

HON. GEO. A. COX, President. J. J. KENNY, Vice-President
P. H. SIMS, Secretary. and Managing Director

Money

CAN BE SAVED BY MEANS
OF AN ENDOWMENT POLICY.

**YOU CAN ONLY SECURE
SUCH A POLICY WHILE YOU
ARE IN GOOD HEALTH.**

Pamphlets and Full Particulars regarding the
New Accumulation Endowment Policy
sent on application.

Confederation Life ASSOCIATION.

W. H. BEATTY, PRESIDENT.

W. O. MACDONALD,
ACTUARY.

J. K. MACDONALD,
MANAGING DIRECTOR.

HEAD OFFICE, - TORONTO, CANADA.

THE CANADIAN BANK OF COMMERCE.

Paid-up Capital, - - - \$8,700,000
Rest, - - - - - \$3,000,000

HEAD OFFICE: TORONTO, CANADA.

HON. GEO. A. COX, President. B. E. WALKER, General Manager.

The offices of this Bank number 111, distributed as follows:

LONDON, ENG., 60 Lombard St., E.C., S. Cameron Alexander, Manager. NEW YORK, N.Y., 16 Exchange Place, Wm. Gray and H. B. Walker, Agents

104 Branches throughout Canada, including the following:

MONTREAL, F. H. Mathewson, Manager. TORONTO, John C. Kemp, Manager.
HALIFAX, H. N. Wallace, Manager. VANCOUVER, Wm. Murray, Manager.
WINNIPEG, John Aird, Manager. OTTAWA, Robert Gill, Manager.
ST. JOHN, N.B., J. G. Taylor, Manager. VICTORIA, Geo. Gillespie, Manager.
DAWSON, D. A. Cameron, Manager. HAMILTON, D. B. Dewar, Manager.

5 Branches in the United States, including the principal cities of the Pacific Coast:

SAN FRANCISCO, CAL., Arch. Kains, Manager. SEATTLE, WASHINGTON, G. V. Holt, Manager.
SKAGWAY, ALASKA, H. M. Lay, Manager. PORTLAND, OREGON, E. A. Wyld, Manager.

A General Banking Business Transacted.

Foreign Exchange Bought and Sold.

The distribution of its Canadian branches covering all the principal cities and towns throughout the Dominion, its own offices in England and the United States, and its correspondents in all parts of the world, enable The Canadian Bank of Commerce to offer unexcelled facilities to merchants, manufacturers and exporters for the transaction of their business.

MANUFACTURERS AND MERCHANTS.

It may be necessary for your staff to have fidelity bonds. We act as surety on such. We are known the world over.

Write to us for terms and particulars.

The London Guarantee & Accident Co., Limited,

D. W. ALEXANDER, General Manager for Canada,
Canada Life Building, - - - TORONTO.

CAPITAL PAID UP, - - \$1,000,000.
RESERVE FUND, - - 1,000,000.

THE METROPOLITAN BANK.

DIRECTORS

R. H. WARDEN, D.D., President S. J. MOORE, Esq., Vice-President
D. E. THOMPSON, Esq., K.C. His Honor W. MORTIMER CLARK, K.C.
THOS. BRADSHAW, Esq.

HEAD OFFICE, - TORONTO.

W. D. ROSS, GENERAL MANAGER.

GENERAL
BANKING
BUSINESS
TRANSACTION

SAVINGS DEPARTMENT

at all Branches.

ACCOUNTS SOLICITED

Drafts Bought and Sold.
Letters of Credit Issued.

FINANCE AND INSURANCE

A GOVERNMENT blue book containing official figures relating to the life insurance business in Canada has recently been issued. The report affords reliable evidence of the growth of prosperity and the systematic thrift and carefulness of our population. In 1883 the total amount of life insurance effected in Canada was only \$21,572,960 and the total in force totalled \$124,196,875; the return just issued shows that \$91,567,805 of new policies were effected last year and that the record amount of \$548,443,000 was in force.

In 1875 American companies held over one-half of the total life insurance in force in Canada, British companies nearly twenty millions and Canadian companies only \$21,957,296. For the year 1903, this situation shows a remarkable change. Canadian companies held \$335,638,940; American companies, \$170,676,800, and British companies, \$42,127,260.

Satisfactory evidences of the stability of the Canadian companies are afforded by the blue book. To-day several of them are finding a remunerative field for their operations outside Canada.

...

AT the forty-ninth annual meeting of the Molsons Bank, which took place on October 17, the directors had the pleasure to announce another prosperous year. A notable feature of the annual statement was the addition of \$150,000 to the reserve fund, which brings that account up to a level with the paid-up capital, or \$3,000,000. That is a very strong position. The net profits amounted to \$457,290, or about fifteen and a quarter per cent. Two half-yearly dividends have been paid at the rate of nine per cent. per annum, and another year it is extremely probable that the bank will be in the ten per cent. dividend class. A few years ago the directors were asked to increase the dividend to ten per cent., but they preferred instead to increase the reserve fund until such time as it equalled the capital, and they were wise. The reserve of three million dollars having now been obtained, and the whole of it invested so as to be promptly realizable and available to meet any demands, the prospects for a ten per cent. dividend next year are very bright indeed, especially now that the assured good harvest and high prices promise another year of expansion.

...

FAILURES in Canada for the nine months ending September 30th, were 910. Liabilities aggregated \$8,988,140, compared with 721 last year for \$5,332,611. It must be remembered, however, that 1903 was a phenomenally prosperous year in Canada. Manufacturing failures were 225 in number and \$3,642,161 in amount, against 167 for \$2,090,744 in 1903; trading insolvencies numbered 665, and involved \$5,060,986, which compare with 538 failures and \$3,090,986 liabilities a year ago; other failures were unimportant in both years, except for a few large banks in 1903. Losses in Ontario were slightly larger than

in Quebec, while British Columbia and Nova Scotia were unusually close together in this respect.

For the quarter ending 30th September a slight increase in both number and liabilities of manufacturing insolvencies was reported by the Dominion of Canada. But five branches of business showed a decrease, and in three cases there were no liabilities recorded in either year, while in six classes there was a large balance in favor of last year. The striking changes were in the wood and miscellaneous branches, due to heavy suspensions this year of saw and pulp mills. As to trading failures, the statement is much less satisfactory than that of 1903, which was an unusually good year. Only four occupations reported smaller losses, one was unchanged, and nine showed more or less increase. General stores suspended with almost double last year's liabilities, and there was a still more striking increase in the amount involved by failures in dry goods defaults. This was due to a few large failures, as the total number was not exceptional.

NOTES.

At the sixth annual banquet of the Toronto Insurance Institute on October 11, about 150 guests were present.

An office of the Crown Bank of Canada has been opened at Woodstock, Ontario, under the management of Mr. S. B. Fuller.

Last month the Quebec Fire Assurance Company formally opened their reconstructed building on St. Peter street, Quebec.

Mr. W. K. McNaught, president of the Toronto Industrial Exhibition, has been elected a director of the Sovereign Bank of Canada.

Mr. R. S. Schell, manager of the Royal Loan & Savings Company, and one of the best known business men of Brantford, died on October 4.

The Canadian Bank of Commerce have added another branch to their already long list in Canada. The latest branch to be opened is at Nanton, Alta.


The aggregate of the bank clearings in Toronto for the week ending October 20 is \$19,329,254, as against \$19,790,488 on October 13 and \$20,816,890 on October 6. The present situation is particularly satisfactory.

La Banque Nationale has opened two new branches in the Province of Quebec, one at Amqui, under the management of Mr. Ernest Bilodeau, and the other at Deschailons (formerly St. Jean Deschailons), under the management of Mr. A. A. Dionne. This bank now has 28 branches, all but one of which are in the Province of Quebec, the branch being the exception being at Ottawa.

The Manchester Assurance Company of Manchester, England, have ceased to carry on business in Canada and have insured all their outstanding risks in Canada with the Atlas Insurance Company, Limited. Application has been made for the release on January 17th, 1905, of the securities, and the Canadian policyholders opposing such release are required to file their opposition with the Minister of Finance on or before that date.

WE TALK QUALITY WITH CONFIDENCE

because we know that our

Ready Roofing, Sheathing and Black  Diamond Tarred Felts,
Building Papers, Fibre and Manilla Wrappings, etc.,
are unexcelled.

Ask for our quotations—they will interest you.

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLIETTE, QUE.

ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET, MONTREAL

CURRENT MARKET QUOTATIONS.

Nov. 4, 1904.

BABBIT METAL.

These prices are for such qualities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.
Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TINPLATES.

Charcoal Plates—Bright.
M.L.S., equal to Bradley— Per box.
I O usual sizes..... \$6 50
I X "..... 8 00
I X X "..... 9 50
Famous, equal to Bradley—
I O "..... 6 75
I X "..... 8 25
I X X "..... 9 75
Raven and Vulture Grades—
I O usual sizes..... 4 25
I X "..... 5 00
I X X "..... 5 75
I X X X "..... 6 50

"Dominion Crown Best"—Double
Coated, Tissue. Per box.
I O..... 5 50
I X..... 6 50
I X X..... 7 50

Allways's Best"—Standard Quality.
I O..... 4 50
I X..... 5 50
I X X..... 6 50

Coke Plates—Bright.
Beasmer Steel—
I O, usual size, 14x20..... 3 35
I O, special sizes, base..... 3 60
20x28..... 7 10

Dean or J. G. Grade—
I O, 20x28, 112 sheets..... 7 50
I X, Terne Tin..... 10 50

Charcoal Tin Roller Plates.
Cookley Grade—
X X, 14x56, 50 sheet bxs. }
" 14x60, " }
" 14x65, " }..... 7 00

Tinned Sheets.
72x30 up to 24 gauge..... 7 25
26 "..... 7 75

IRON AND STEEL.

Common bar, per 100 lb..... 1 75
Refined "..... 2 05
Horseshoe Iron "..... 2 30
Hoop steel, 1 1/2 to 3-in. base..... 2 75
Sleigh shoe steel, "..... 2 10
Tire steel..... 2 30
T. Firth & Co.'s tool steel, per lb 0 12 1/2
B. K. Morton & Co.—
" Alpha " tool steel..... 0 13
" M " Self-Hardening..... 0 60
" T " Standard..... 0 14
Chas. Leonard's tool..... 0 08
Crucible Steel Co.
" Black Diamond..... 0 10
" Silver steel..... 0 13
" Special..... 0 17
" Rex high speed steel..... 0 65
" Self-Hardening..... 0 45
Sanderson's Crucible Tool..... 0 08
" Superior..... 0 12
" Extra And..... 0 15
" Self-Hardening..... 0 45
" Rex high speed..... 0 65
Jonas & Colver's tool steel..... 0 10
" Air Hardening..... 0 70
Drill steel, per lb..... 0 08

Syracuse Smelting Works:
Aluminum, genuine..... 0 45
Government, "..... 0 44
Tough, "..... 0 40
Hard, "..... 0 40
Dynamo..... 0 30
Special..... 0 25
Harmony..... 0 22
Car Box..... 0 20
Extra..... 0 15

The Canada Metal Co.:
Imperial, genuine..... 0 40
Metallic..... 0 30
Hercules..... 0 20
Star..... 0 15
No. 1..... 0 12
No. 2..... 0 10
No. 3..... 0 06
No. 4..... 0 05

BLACK SHEETS.

Montreal, Toronto
10 gauge..... 2 30
12 and 14 gauge..... 2 30
17 "..... 2 30
22 to 24 gauge..... 2 35
26 "..... 2 40
28 "..... 2 40

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary..... 2 40
All bright..... 3 30
Galvanized Canada Plates— Ordinary. Dom. Crown.
18x24x52..... 4 25
" 60..... 4 50
20x28x80..... 8 50
" 94..... 9 00

GALVANIZED SHEETS. Queen's
Fleur-de-Lis, Gordon Crown, Comet Bell Head
16 gauge..... 3 65
18 to 24 gauge..... 3 75
26 "..... 4 00
28 "..... 4 25

American brands, \$4.00 for 10 1/2 oz.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 5-16 "..... 4 45
" 7-16 "..... 3 70
" 1-16 "..... 3 55
" 1-16 "..... 3 35
" 1-16 "..... 3 25
Halter, kennel and post chains, 40 to 40 and
5 per cent.
Cow ties..... 40 p.c.
Tie out chains..... 65 p.c.
Stall fixtures..... 35 p.c.
Trace chain..... 45 p.c.
Jack chain, iron, single and double, discount
35 p.c.
Jack chain, brass, single and double, discount
40 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots..... 13 75
Bars.
Cut lengths, round, 1/2 to 1 in., 21 00 23 00
" round and square, 1 to 2 inches..... 21 23 00
Sheet.
Plain, 16 oz., 14x48 and 14x60..... 20 00
Plain, 14 oz.,..... 21 00
Tinned copper sheet..... 24 00
Planished..... 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 "..... 0 21
" 50-lb. and above "..... 0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb..... 0 28
Spun, per lb..... 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4..... 0 23
Tubing, base, per lb..... 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb..... 6 00
Domestic "..... 5 50

ZINC SHEET.

5-cwt. casks..... 6 25
Part casks..... 6 50

LEAD.

Imported Pig, per 100 lb..... 3 20
Bar, per lb..... 0 05
Sheets, 2 1/2 lb. sq. ft., by roll..... 0 06 1/2
Sheets, 3 to 6 lb. "..... 0 06
NOTE.—Cut sheets 1c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. f.o.b. Toronto.
NOTE.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's..... per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count, 17 1/2 p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.
Zinc..... 6 00
Copper, discount 20 per cent. off revised list.
BATHS.
Standard Ideal Enameled..... 21 25
5 1/2-ft. 2 1/2 in. rolled rim, 1st quality..... 17 25
" 2nd "..... 17 25

CLOSETS.

Fittings..... 1 00
Plain Simplex Syphon Jet..... 9 00
Emb..... 9 50
Fittings..... 1 25
Low Down Elgin or Teutonic, plain..... 6 00
Low " emb..... 6 50
Connection..... 1 25
Plain Richelieu..... 4 25
Emb..... 4 50
Connections..... 1 25
Basins, P.O., 14-in..... 0 63
Basins, oval, 17 x 14-in..... 1 50
Basins, " 19 x 15-in..... 2 00

IRON PIPE.

Black pipe— Per 100 feet.
1/2 inch..... 1 97
"..... 2 15
"..... 2 28
"..... 2 86
1 "..... 4 10
1 1/2 "..... 5 62
2 "..... 6 72
2 1/2 "..... 8 98
3 ".....
3 1/2 ".....
4 ".....
4 1/2 ".....
5 ".....

Galvanized pipe—
1/2 inch..... 2 80
"..... 2 86
"..... 3 14
"..... 4 01
1 "..... 5 75
1 1/2 "..... 7 85
2 "..... 9 43
"..... 12 57

Malleable Fittings—Discount 20 p.c.
Cast Iron Fittings—
Standard, 5 1/4 per cent.; unions, 55 per cent.;
on nipples, headers and flanged unions, 60
per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dia. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra dis-
count 10 per cent.
Lever handle Stops and Waste, discount 60
per cent. With in lots of 2 dozen and over
an extra discount of 10 per cent.
J.M.T. Globe, Angle and Check Valves, dis-
count 55 per cent.
Standard Globe, Angle and Check Valves,
discount 65 per cent.
Kerr's special standard globes and angles,
discount 60 per cent.
Kerr's Jenkin disc, copper-alloy disc and
heavy standard valves, discount 60 per cent.
Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator
valves, discount 70 per cent.
Kerr's Jenkin disc, copper-alloy disc radi-
ator valves, discount 70 per cent.
Kerr's quick-opening hot water radiator
valves, discount 70 and 10 per cent.
Weber's (Kerr) patent straightway gate
valves, brass, discount 55 per cent.
Weber's (Kerr) patent straightway gate
valves, I.B.B.M., discount 70 per cent.
J.M.T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 65 per
cent.
Patent Quick-Opening Valves, discount 70
per cent.

No. 1 compression bath cock..... net 1 75
No. 4 "..... 1 90
No. 7 Fuller's..... 2 10
No. 4 1/2 "..... 2 25
Patent Compression Cushion, basin
cock, hot and cold..... per doz. 15 00
Patent Compression Cushion, bath
cock, No. 2208..... 2 25
Square head brass cocks, discount 55 per cent
" iron " 50 to 60
Thompson Smoke-test Machine \$25.00

RANGE BOILERS.

Copper, 30 gallon..... 22 00
" 35 "..... 24 00
" 40 "..... 28 00
Discount off copper boilers 15 per cent.

SOID PIPE AND FITTINGS.

Light soil pipe, discount, 50 per cent.
" fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60
per cent.
and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.

Bar, half-and-half, guaranteed..... 0 18
Bar, half-and-half, commercial..... 0 17

WRENCHES.

Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 20 to 25 per cent.
Towers' Engineer..... each 2 00 7 00
" S..... per doz. 5 80 6 00
G. & K.'s Pipe..... each 3 40
Burrell's Pipe..... each 3 00
Pocket..... per doz. 0 25 2 90

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt.	Less than this
quantity 4c. extra	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 33 p.c.	2 00
Burnt sienna	2 00
" umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	9 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorators' Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs,	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In 4, ½ and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paint	1 30
Canada Paint Co.'s pure	1 25
Onto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
" Thistle	1 00
" Outside, bbls	0 55
Island City House Paint	1 25
" Floor	1 25
Sterling House Paint	1 20
" Floor	1 10
National	1 05

PATTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
" rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
" No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
" orange	2 30	2 40
Carpentine, brown japan	1 10	1 20
" black japan	1 10	1 20
" No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	2 00
Granite floor finish, per gal	2 75	2 75
Maple Leaf coach enamels, size 1, \$1.20; size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, case, from to 1 gal., \$2.50.	assorted	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine		
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner		
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
American \$2.00 per 1000.	
C. B. Caps American, \$2.60 per 1000.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, list net Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American	
10 per cent. advance on list.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

	per lb.
Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8	0 90
5 and 6	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8	1 65
5 and 6	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.

Woodyatt Hudson, per doz., net	4 50
Gilmour's, discount 65 and 5 per cent. off list.	

AXES.

Chopping Axes	
Single bit, per doz.	7 00
Double bit, " "	10 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50
Boys' Axes	6 25
Splitting Axes	7 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.	
Red Ridge, boys', handled	5 75
" hunters'	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.

Ordinary, per gross	6 00
Best quality	10 00

BELLS.

Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	

American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.

Gongs, Sargent's	5 50
" Peterboro', discount 50 and 10 per cent. off new list.	8 00

Farm.

American, each	1 25
House.	0 35
American, per lb.	0 40

BELLOWS.

Hand, per doz.	3 35
Moulders, per doz.	7 50
Blacksmiths', discount 40 per cent.	10 00

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITES.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.

Gilmour's, 47½ per cent.	
Expansive.	
Clark's, 40 per cent.	

Gimlet.

Clark's, per doz	0 65
Diamond, Shell, per doz	1 00
Nail and Spike, per gross	2 25
" full sq. (\$2.40 list)	5 20

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½
Per cent.	0 12

BOLTS AND NUTS.

Carriage Bolts, common (\$1 list)	
" 3-16 and ½	60 and 10
" 5-16 and ¾	55 and 5
" 7-16 and up	55 and 5
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

BOOT CALKS.

Small and medium, ball	4 25
Small heel	4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.	
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BUTCHERS' CLEAVERS.

German	per doz.	6 00
American	"	12 00
		18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60
		6 30

BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 55 lb., per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 600 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof	small packages 0 25
Refined Tar	per barrel 5 00
Coal Tar	" 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 00

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90 for 2-inch	
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BUTTS.

Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 40 per cent.	

Wrought Steel.

Fast Joint, discount 70 to 70 and 5 per cent.	
Loose Pin, discount 70 to 70 and 5 per cent.	

CARPET STRETCHERS.

American	per doz.	1 00
Bullard's	"	6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50
		8 50

CHALK.

CHALK.		
Carpenters' Colored, per gross	0 45	0 75
White lump.....per cwt.	0 60	0 85
Red	0 05	0 06
Crayon.....per gross	0 14	0 18

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,	
" " " 25c. pkgs.,	per doz \$4 00
" " " 10c.	" 2 00
" " " 25-lb. pail, each	1 25
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz.	1 25
Worm	1 25
International 1 Stock Foods, \$1 packages,	
per doz.	8 00
International Stock Foods, per pail	2 75
" " " per bbl.	10 50
" " " Poultry \$1 pkgs., per doz.	8 00
" " " Worm Powders, 50c. pkgs.	4 00
" " " Fine Healing Oil, per doz	8 00
" " " Pheno-Chloro, \$1 pkgs., per doz	8 00
" " " Hoof Ointment	8 00
" " " Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz	

CLOTHES REELS.

Davis Clothes Reels, dis.	40 per cent.
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An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.		GAUGES.		Clothes line, No. 61..		Cabinet.	
Plain or Corrugated.		Marking, Mortise, Etc.		"		Eagle, discount 30 per cent.	
3-inch		Stanley's, discount 50 to 55 per cent.		"		Padlocks.	
4 "		Wire Gauges.		"		English and Am. per doz.	
5 "		Winn's, Nos. 26 to 33		"		Eagle, discount 20 to 25 per cent.	
6 "		GILLET'S POWDERED LYE.		"		MACHINE SCREWS.	
		1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.		Wrought hooks and staples		Iron and Brass.	
		HALTERS.		Canadian discount 60 per cent.		Flat head, discount 25 per cent.	
CRADLES, GRAIN.		Rope, 1-inch		Wire.		Round head, discount 20 per cent.	
Canadian, discount 20 to 25 per cent.		Rope, 1 1/2-inch		Hat and coat, discount 60 per cent.		MALLET.	
CROSSCUT SAW HANDLES.		Rope, 2-inch		Screw, bright, discount 60 per cent.		Tinmiths'	
S. & D., No. 3		Leather, 1-inch		HORSE NAILS.		Carpenters', Hickory,	
S. & D., " 5		Leather, 1 1/2-inch		"P.B." Brand, 55 to 57 1/2 per cent.		Lignum Vitae	
S. & D., " 6		Web		"C" brand, 40, 10 and 7 1/2 per cent. off list		Caulking, each	
Boynton pattern		HAMMERS.		"M" brand, 55, per cent.		MATTOKS.	
DOOR SPRINGS.		Nail.		"Monarch," 50 and 7 1/2 per cent.		Canadian	
Torrey's Rod		Maydole's, discount 5 to 10 per cent. Canadian		"Peerless," 50 per cent. dia.		MEAT CUTTERS.	
Coll. 9 to 11 in.		discount 25 to 27 1/2 per cent.		HORSESHOES.		German, 15 per cen	
English		TACK.		Iron Shoes.		Gem	
		Magnetic		Light, medium and heavy		Discount 25 per cent.	
DRAW KNIVES.		Canadian		Snow shoes		NAILS.	
Coach and Wagon, discount 50 per cent.		SLEDGE.		Steel Shoes.		2d	
Carpenters' discount 60 and 10 per cent.		Ball Pean.		XL, sizes 1 to 5		3d	
DRILLS.		English and Canadian, per lb.		Light, No. 2 and larger		4 and 7d	
Hand and Breast.		0 22 0 25		No. 1 and smaller		8 and 9d	
Miller's Falls, per doz., net list.		HANDLES.		Featherweight, all sizes 0 to 4		10 and 12d	
DRILL BITS.		Axe, 2nd growth, per doz. net		Toeweight, all sizes 1 to 4		16 and 20d	
Morse, discount 37 1/2 to 40 per cent.		Store door		Add 25c. Toronto or Hamilton.		30, 40, 50 and 60d (base)	
Standard, discount 50 and 5 to 55 per cent.		Fork.		JAPANNED WARE.		Cut nails in carlots 5c. less.	
FAUCETS.		C. & B., discount 40 per cent., revised list.		50 per cent.		Wire nails in carlots are \$2.20 (base).	
Common, cork-lined, discount 35 per cent.		Hoe.		PICKS.		Steel cut nails 10c. extra.	
EAVETROUGHS.		C. & B., discount 40 per cent., revised list.		Star		Miscellaneous wire nails, discount 15 per cent.	
10-inch		Saw.		per doz. 3 00 3 25		Coopers' nails, discount 30 per cent.	
ELBOWS (stovepipe.)		American		KEYS.		NAIL PULLERS.	
5 and 6-inch, common		per doz. 1 00 1 25		Lock, Canadian dis. 40 to 40 and 10 per cent.		German and American	
7-inch		Plane.		Cabinet, trunk and padlock,		NAIL SETS.	
Polished, 15c. per dozen extra.		American		American		Square, round and octagon,	
ESCUTCHEONS.		per gross 3 15 3 75		per gross		per gross	
Discount 50 and 10 per cent., new list		Hammer and Hatchet.		Door, japanned and N.F., per		Diamond	
ESCUTCHEON PINS.		Canadian, discount 40 per cent.		doz. pairs.		POULTRY NETTING.	
Iron, discount 40 per cent.		HANGERS.		Steel barn door		2-in. Mesh, 19 w.g., dis. 60 per cent.	
FACTORY MILK CANS.		Steel, covered		Stearns, 4-inch		2-in. Mesh, 16 w.g. and heavier, 50 p.c.	
Discount off revised list, 40 per cent.		Zenith		5-inch		OAKUM.	
FILES AND RASPS.		Lane's covered—		No. 11, 5-foot run		U. S. Navy	
Great Western		No. 11, 10-foot run		No. 11, 10-foot run		Plumbers	
Arcade		No. 12, 10-foot run		No. 12, 10-foot run		OILERS.	
Kearney & Foot		No. 14, 15-foot run		No. 14, 15-foot run		McClary's Model galvanized	
Dieton's		Steel, covered		" track, 1 x 3-16 in (100 ft)		oil can, with pump, 5 gallon,	
American		" " 1 1/2 x 3-16 in (100 ft)		" " 1 1/2 x 3-16 in (100 ft)		per dozen	
J. Barton Smith		Harvest Tools.		Discount 60 per cent.		Davidson oilers, discount 40 per cent.	
McClellan		HATCHETS.		HAT ENAMEL.		Zinc and tin, discount 50, 50 and 10 per cent.	
Eagle		Canadian, discount 40 to 42 1/2 per cent.		Henderson & Potts' "Anchor Brand"		Copper	
Nicholson, 60 and 10 to 60, 10 and 5		Shingle, Red Ridge 1, per doz.		HINGES.		Brass	
Royal		2, "		Blind, Parker's, discount 60 per cent.		Malleable, discount 25 per cent	
Globe		Barrel, Underhill		Heavy T and strap, 4-in., per lb.		GALVANIZED PAIRS.	
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.		HAT ENAMEL.		" " 5-in., "		Dufferin pattern pairs, discount 45 per cent	
Jowitt's, English list, 25 to 27 1/2 per cent.		Henderson & Potts' "Anchor Brand"		" " 6-in., "		Flaring pattern, discount 45 per cent.	
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50		HINGES.		" " 8-in., "		Galvanized wash tubs, discount 45 per cent.	
GLASS.		Light T and strap, discount 65 and 5 per cent.		" " 10-in., "		PIECED WARE.	
Window. Box Price.		Screw hook and hinge—		LAWN MOWERS FOR 1905.		Discount 40 per cent. off list, June, 1899.	
Star. D. Diamond		6 to 10 in.		Woodyatt, 10 1/2-in., 14-in. cut		10-qt. flaring sap buckets, discount 40 per cent	
Per 50 ft. Per 100 ft.		12 in. up		Star, 9-in.		6, 10 and 14-qt. flaring pails dis. 40 per cent.	
Under 26		Spring, No. 20, per gro. pairs		8-in.		Creamer cans, discount 40 per cent.	
26 to 40		Spring, Woodyatt pattern, per gro. No. 5,		Philadelphia, 7 1/2-in.		PICKS.	
41 to 50		\$17.50; No. 10, \$18; No. 20, \$10.80; No.		Woodyatt, 10 1/2-in., ball bearing 13 25 to 18 00		Per dozen	
51 to 60		120, \$20; No. 51, \$10; No. 50, \$27.50.		Grass Boxes		PICTURE NAILS.	
61 to 70		HOES.		King Edw'd, 12-in., 14-in. cut		Porcelain head	
71 to 80		Garden, Mortar, etc., discount 60 per cent.		Horse Lawn Mowers, "Special."		Brass head	
81 to 85		Planter		Discount, 50 per cent., with freight concessions in quantity shipments.		Tin and gilt, discount 75 per cent.	
86 to 90		Tinned cast, 35 per cent.		Maxwell & Sons:		PICTURE WIRE.	
91 to 95		HOLLOW WARE.		10 1/2-in. high wheel		1/2 pint in tins	
96 to 100		Cast Iron.		9-in.		1 " "	
		Bird cage		8-in.		PLANES.	
				Discount 50 per cent.		Wood bench, Canadian discount 40 per cent.,	
				LOOKS.		American discount 50 per cent.	
				Canadian, 50 to 50 and 10 per cent.		Wood, fancy Canadian or America	
				Russell & Erwin		40 per cent	

**PLENTY OF
LIGHT ATTRACTS
ATTENTION TO
A STORE.**

**THE AUER GASOLINE LAMP
GIVES 100 CANDLE POWER at a
cost of 7c. a week.**

Beats gas, electricity, or coal oil.
Satisfaction guaranteed. Catalogue on request.

AUER LIGHT CO., - MONTREAL,
Sole Makers.

WE'RE PROUD
of the immense success attained by

**REX Flintkote
Roofing**

and you will be as well pleased
if you investigate its good qual-
ities. Waterproof, fire-resisting,
and not affected by the vapors of
acids or alkalis, it should be used
on any building where a perma-
nent roof is required. Any one
can lay it, each roll containing
nails, caps and cement sufficient
for laying. Our free samples
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on receipt of your name.

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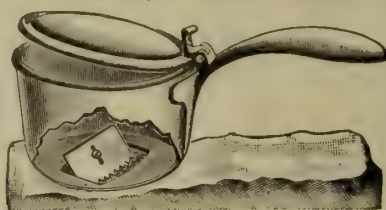
"LOOK FOR THE BOY" ON EVERY ROLL

PLANE IRONS.		SAP SPOUTS.	
English	per doz. 2 00 5 00	Bronzed iron with hooks ... per 1,000	7 50
PLIERS AND NIPPERS.		"Eureka" tinned steel, hooks "	8 00
Button's genuine, per doz. pairs, discount		SAWS.	
37 1/2 to 40 per cent.		Hand, Diston's, discount 12 1/2 per cent	
Button's imitation	per doz. 5 00 9 00	S. & D., discount 40 per cent.	
German	" 0 60 0 60	Crosscut, Diston's	per foot 0 35 0 55
PRESSED SPIKES.		S. & D., discount 35 per cent. on Nos. 2 and 3.	
Discount 20 per cent.		Hack, complete	each 0 75 2 75
PULLEYS.		" frame only	each 0 50 1 25
Hothouse	per doz. 0 55 1 00	SASH WEIGHTS.	
Axle	" 0 22 0 33	Sectional	per 100 lb. 2 00 2 25
Screw	" 0 27 1 00	Solid	" 1 50 1 75
Awning	" 0 35 2 50	SASH CORD.	
PUMPS.		Per lb.	0 28 0 30
Canadian cistern	1 80 3 60	SAW SETS.	
Canadian pitcher spout	1 40 2 10	Lincoln and Whiting	4 75
PUNCHES.		Hand Sets, Perfect	4 00
Saddler's	per doz. 1 00 1 85	X-Cut Sets,	7 50
Conductor	" 3 00 15 00	SCALES.	
Pinners, solid	per set 0 72	Gurney Standard, 40 per cent.	
" hollow	per inch 1 00	Gurney Champion, 50 per cent.	
RAKES.		Burrow, Stewart & Milne—	
Wood	per doz. net 1 20 up.	Imperial Standard, discount 40 per cent.	
RAZORS.		Weight Beams, discount 35 per cent.	
Elliot's	4 00 18 00	Champion Scales, discount 50 per cent.	
Geo. Butler's & Co.'s	4 00 18 00	Fairbanks standard, discount 35 per cent.	
Boker's	7 50 11 00	" Dominion, discount 55 per cent.	
" King Cutter	13 50 18 50	" Richelieu, discount 55 per cent.	
Wade & Butcher's	3 60 10 00	Warren's new Standard, discount 40 per cent.	
Carbo Magnetic	15 00	" Weighbeams, discount 35 per cent.	
Grifton Barber's Favorite	10 75	SCREW DRIVERS.	
Grifton No. 65	13 00	Sargent's	per doz. 0 65 1 00
Grifton Safety Razors	13 50	SCREEN DOORS.	
Grifton Stropping Machines	13 50	Common doors, 2 or 3 panel, walnut	
Lewis Bros. "Klean Kutter"	8 50 10 50	stained, 4-in. style	per doz. 6 50
Hindoo	10 50 14 00	Common doors, 2 or 3 panel, yellow and	
Orgsteom's Swedish	3 50 10 00	green stained, 4-in. style	per doz. 6 75
Clauss, 50 and 10 per cent.		Common doors, 2 or 3 panel, in natural	
Clauss Stropps, 50 and 10 per cent.		colors, oil finish	per doz. 8 75
REGISTERS.		3-in. style 20c. per dozen less.	
Discount 40 per cent.		SCREWS.	
RIVETS AND BURRS.		Wood, F. H., bright and steel, discount 87 1/2	
Iron Rivets, black and tinned, 60 and 10 p. s.		per cent.	
Iron-Burrs, discount 55 per cent.		Wood, R. H., bright, dis. 82 1/2 per cent.	
Copper Rivets, with usual proportion burrs, 45		" F. H., brass, dis. 80 per cent.	
per cent.		" R. H., dis. 75 per cent.	
Copper Burrs only, discount 30 and 10 per cent.		" F. H., bronze, dis. 75 per cent.	
Extras on Tinned or Coppered Rivets, 1-lb.		" R. H., dis. 70 per cent.	
packages 1c. per lb.; 1-lb. packages 2c. lb.		Drive Screws, dis. 87 1/2 per cent.	
RIVET SETS.		Bench, wood	per doz. 3 25 4 00
Canadian, discount 35 to 37 1/2 per cent.		" iron	" 4 25 5 00
ROPE, ETC.		Set, case hardened, dis. 60 per cent.	
Sisal	0 11	Square Cap, dis. 50 and 5 per cent.	
Pure Manila	0 14	Hexagon Cap, dis. 45 per cent.	
"British" Manila	0 11 1/2	SOYTHES.	
Cotton, 3-16 inch and larger	0 21 0 22	Per doz. net	6 00 9 00
" 5-32 inch	0 25 0 27	SOYTHE SNATHS.	
" 1/2 inch	0 25 0 28	Canadian, discount 40 per cent.	
Russia Deep Sea	0 16	SHEARS.	
Jute	0 09	Clauss, nickel, discount 80 per cent.	
Lath Yarn, single	0 10	Clauss, Japan, discount 67 1/2 per cent.	
" double	0 10 1/2	Clauss, tailors, discount 40 per cent.	
Sisal bed cord, 48 feet	per doz. 0 65	Seymour's, discount 50 and 10 per cent.	
" 60 feet	" 0 80	SHOVELS AND SPADES.	
" 72 feet	" 0 95	Canadian, discount 45 per cent.	
RULES.		SINKS.	
Boxwood, discount 70 per cent.		Castiron, 16 x 24	0 85
Ivory, discount 20 to 25 per cent.		" 18 x 30	1 00
SAD IRONS.		" 18 x 36	1 40
Mrs. Potts, No. 55, polished	per set 0 80	SNAPS.	
No. 50, nickel-plated,	0 90	Harness, German, discount 25 per cent.	
Common, plain	4 50	Lock, Andrews	4 50 11 50
" plated	5 50	SOLDERING IRONS.	
SAND AND EMERY PAPER.		1, 1-lb.	per lb. 0 37
R. & A. sand, discount, 40 and 5 per cent.		2-lb. or over	0 34
Emery, discount 40 per cent.		SQUARES.	
Garnet (Burton's), 5 to 10 per cent. advance		Iron, No. 492	per doz. 1 90 2 25
on list.		" No. 493	" 2 40 2 55
		" No. 494	" 3 25 3 40
		STAMPED WARE.	
		Steel, discount 60 and 5 to 65 per cent.	
		Try and Bevel, discount 50 to 52 1/2 per cent.	
		STAMPED WARE.	
		Plain, discount 75 and 12 1/2 per cent. off re-	
		vised list.	
		Retinned, discount 75 per cent. off revised list.	

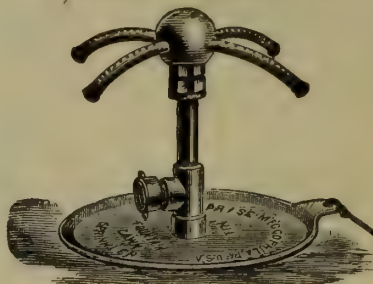
STAPLES.		ENAMELED WARE.	
Galvanized	3 00	White, Princess, Turquoise, Blue and White	
Plain	2 80	discount 50 per cent.	
Coopers, discount 45 per cent.		Diamond, Famous, Premier, discount 50 and	
Poultry netting staples, discount 40 per cent.		10 per cent.	
STOCKS AND DIES.		Granite or Pearl, Imperial, Crescent, discount	
American discount 25 per cent.		50, 10 and 10 per cent.	
STONE.		Premier steel ware, 40 per cent.	
Washita	per lb. 0 28 0 60	"Star" decorated steel and decorated white,	
Hindostan	" 0 06 0 07	25 per cent.	
" slip	" 0 59 0 09	WIRE.	
Labrador	" 0 10 0 13	Smooth Steel Wire.	
" Axe	" 0 15 0 15	No. 0-9 gauge.	\$2 25
Turkey	" 0 80 0 80	10 "	6c. extra.
Arkansas	" 1 50 1 50	11 "	12c. "
Water-of-Ayr	" 0 10 0 10	12 "	20c. "
Soythe	per gross 3 50 5 00	13 "	30c. "
Grind, 40 to 200 lb., per ton	25 00	14 "	40c. "
" under 40 lb.,	28 00	15 "	55c. "
" 200 lb. and over	31 00	16 "	70c. "
STOVEPIPES.		Add 60c. for coppering and \$2 for tinning.	
5 and 6 inch, per 100 lengths	7 00	Extra net per 100 lb.—Oiled wire 10c.,	
7 inch	7 50	spring wire \$1.25, special hay baling wire 30c.,	
TACKS, BRADS, ETC.		best steel wire 75c., bright soft drawn 15c.,	
Carpet tacks, blued	80 and 15	charcoal (extra quality) \$1.25, packed in casks	
" tinned	80 and 20	or cases 15c., bagging and papering 10c., 50	
" (in kegs)	40	and 100-lb. bundles 10c., in 25-lb. bundles	
Cut tacks, blued, in dozens only	80	15c., in 5 and 10-lb. bundles 25c., in 1-lb.	
" weights	60	hanks, 50c., in 1-lb. hanks 75c., in 1-lb.	
Swedes cut tacks, blued and tinned—		hanks \$1.	
In bulk	80 and 10	Fine Steel Wire, discount 27 1/2 per cent.	
In dozens	75	List of extras: In 100-lb. lots: No. 17,	
Swedes, upholsterers', bulk	85, 12 1/2 and 12 1/2	\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—	
" brush, blued and tinned	70	No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—	
Swedes, gimps, blued, tinned and		24, \$8—No. 25, \$8.30—No. 26, \$8.50—No. 27,	
japanned	75 and 12 1/2	\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—	
Zinc tacks	35	No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,	
Leather carpet tacks	55	\$17. Extras net—tinned wire: Nos. 17-25,	
Copper tacks	50	\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,	
Copper nails	52 1/2	5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5	
Trunk nails, black	65 and 5	and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.	
Trunk nails, tinned	65 and 10	—in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—	
Clout nails, blued	65 and 5	packed in casks or cases, 15c.—bagging or	
Chair nails	35	papering 10c.	
Patent brads	40	Brass wire, discount 60 per cent. off the list.	
Fine finishing	40	Copper wire, discount 60 per cent. net cash	
Lining tacks, in papers	10	30 days, f.o.b. factory.	
" in bulk	15	Galvanized wire, per 100 lb.—Nos. 4 and 5,	
" solid heads, in bulk	75	\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15	
Saddle nail, in papers	10	—No. 9, \$2.55—No. 10, \$3.20 to \$3.20	
" in bulk	15	—No. 11, \$3.25 to \$3.25—No. 12, \$2.65	
Tufting buttons, 22 line, in doz-		—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No	
ens only	60	15, \$4.30—No. 16, \$4.30. Base sizes, Nos.	
Zinc glaziers' points	5	6 to 9, \$2.27, f.o.b. Cleveland. In carlots	
Double pointed tacks, papers	90 and 10	12c. less.	
bulk	40	Clothes Line Wire, regular 7 strand, No. 17,	
Clinch and duck rivets	45	\$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow	
TAPE LINES.		6 strand, No. 17, \$4.30; No. 18, \$2.70; No.	
English, ass skin	per doz. 2 75 5 00	19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,	
English, Patent Leather	5 50 9 75	Toronto, Montreal.	
Chesterman's	each 0 90 2 85	WIRE FENCING.	
" steel	each 0 80 8 00	Galvanized barb	2 50 2 75
TINNERS' SNIPS.		Galvanized, plain twist	2 50 2 75
Per doz.	3 00 15 00	Galvanized barb, f.o.b. Cleveland, \$2 25 to	
Clauss, discount 35 per cent.		\$2 50 in less than carlots, and \$2 45 in car-	
THERMOMETERS.		lots.	
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Wrapping, cotton, 3-ply	0 24	Dowsewell	36 00
" 4-ply	0 27	New Century, per doz	72 00
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Staging	0 27 0 35	Daisy	48 00
VISES.		WRINGERS.	
Wright's	0 13 1 13	Leader	per doz. 30 00 33 00
Brook's	0 12 1 12	Royal Canadian	24 00
Pipe Vise, Hinge, No. 1	3 50	Royal American	24 00
" No. 2	5 50	Sampson	24 00
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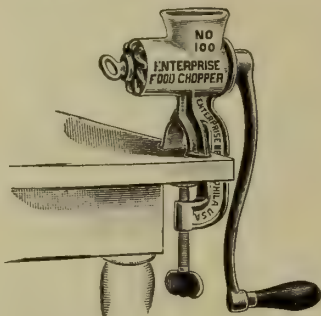
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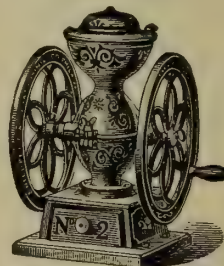
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St. Thomas Acetylene Mfg. Co., St. Thomas, Ont.

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Guelph Foundry Co., Guelph.
Gurney Foundry Co., Toronto.
Kemp Mfg. Co., Toronto.
Ives, H. R. Co., Montreal.
McClary Mfg. Co., London.
Merrick, Anderson & Co., Winnipeg.
Sterne, G. F., & Son, Brantford, Ont.
Stewart James Mfg. Co., Woodstock.
Telephone City Stoves, Brantford.
Western Foundry Co., Wingham.
Wright, E. T., & Co., Hamilton.

Vises.

Lamplough, F. W., & Co., Montreal.

Wall Paper.

Staunton's Limited, Toronto.

Warehouse Trucks.

Fairbanks Co., Montreal.
Slingsby, H. C., Montreal.

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Connor, J. H., & Son, Ottawa.
Taylor Forbes Co., Guelph, Ont.

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Birkett, Thos., & Sons Co., Ottawa.
Bowman, John, Hardware & Coal Co., London, Ont.
Canada Hardware Co., Montreal.
Howland, H. S. Sons & Co., Toronto.
Kennedy Hardware Co., Toronto.
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Ironside, Son & Co., London, Eng.
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Merrick, Anderson & Co., Winnipeg.
Oneida Community, Niagara Falls, Ont.
Ontario Wire Fencing Co., Picton, Ont.
Owen Sound Wire Fence Co., Owen Sound.
Page Wire Fence Co., Walkerville, Ont.
Walter, E. F. & Co., Montreal.
Western Wire & Nail Works, London, Ont.

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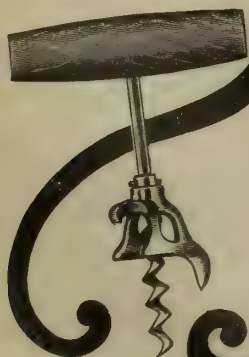
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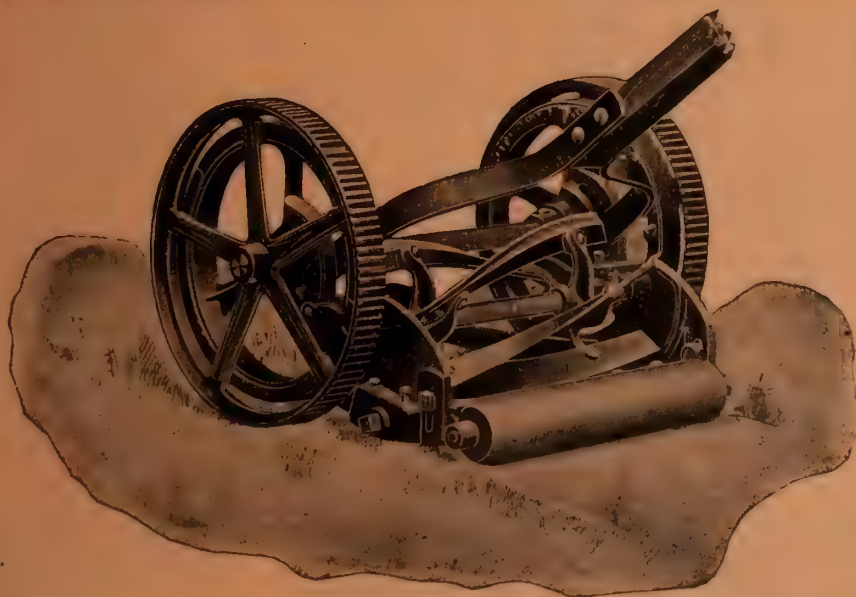
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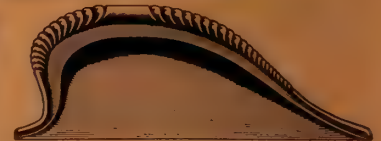
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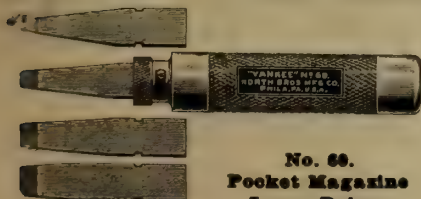
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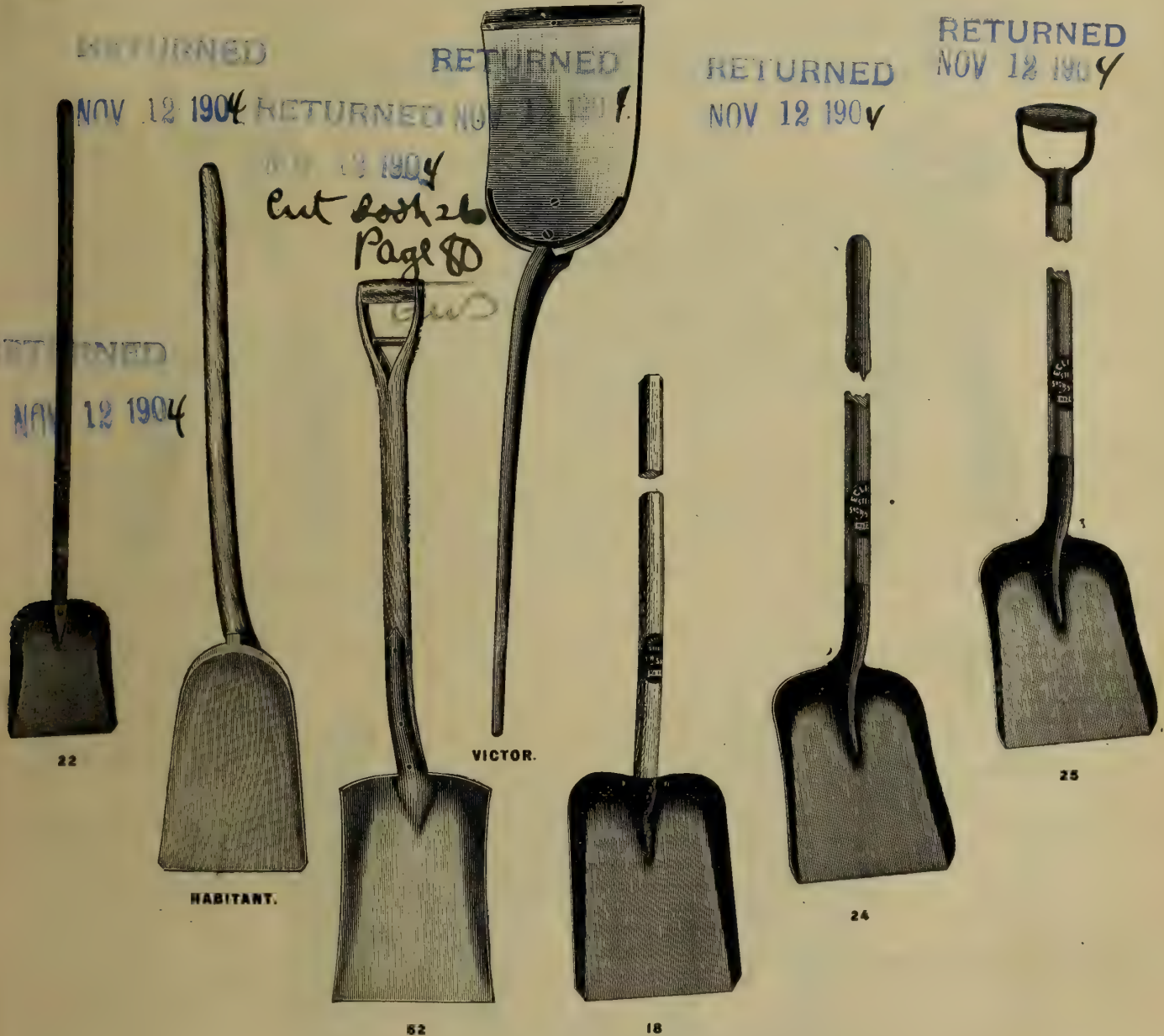
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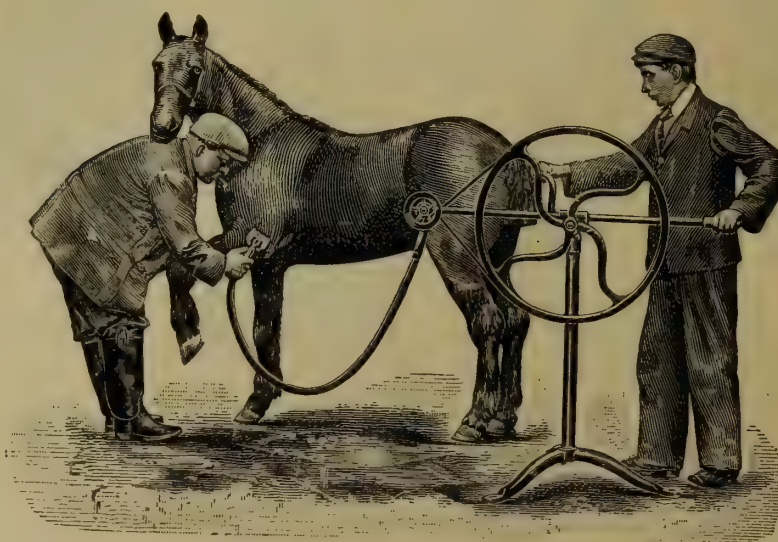
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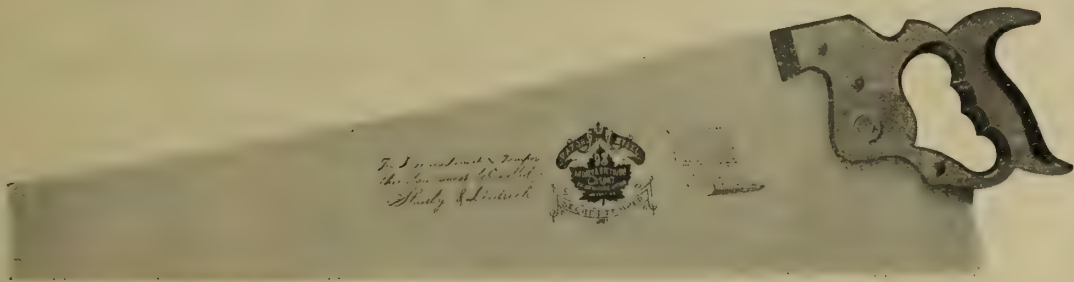
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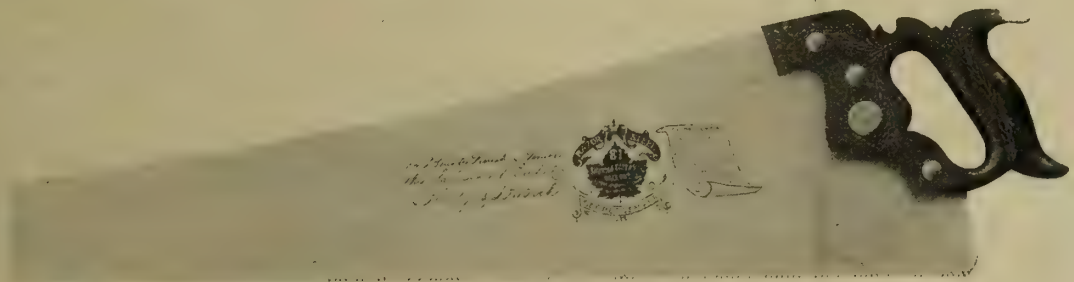
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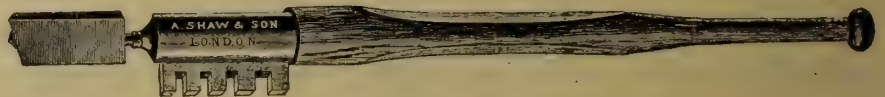
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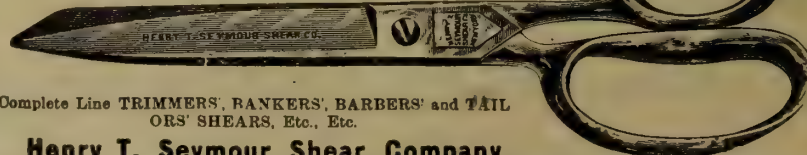
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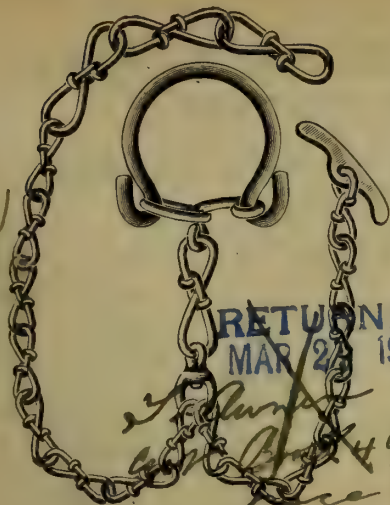


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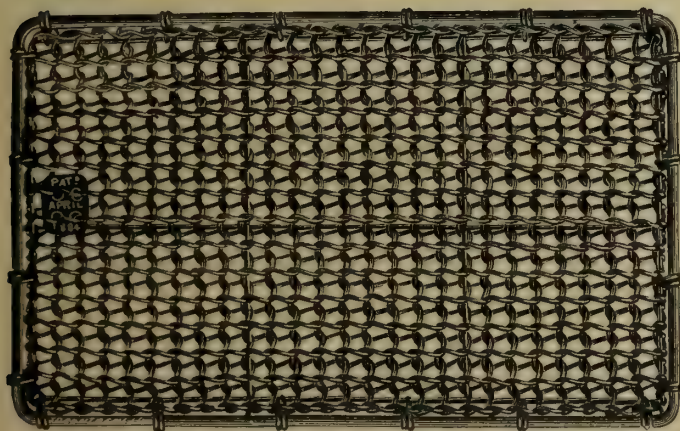
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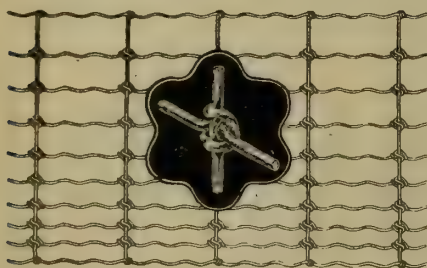
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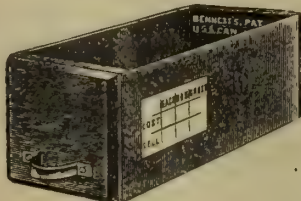
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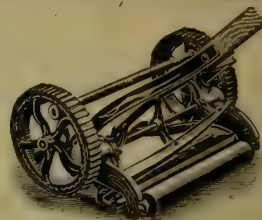
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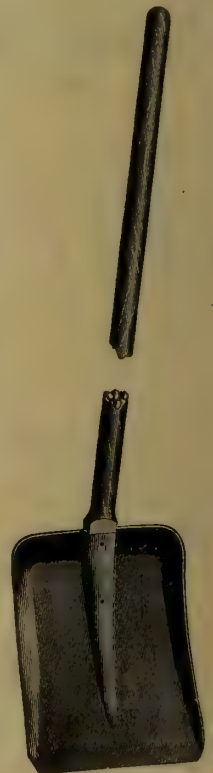
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The Application of Dry-Air Blast to the Manufacture of Iron

Paper read by James Gayley at the Meeting of The Iron and Steel Institute, New York.

THE atmosphere, which plays such an important part in the manufacture of iron and steel, is the most variable element to contend with in its several processes; and particularly is this true of the blast-furnace process, which consumes air in large quantities. At no time since the blast-furnace became an important and widely used apparatus—even when it was operated in the most crude manner—have the variations in composition of the raw materials used been as frequent and as great as the variations in humidity of the atmosphere. Great and important improvements have been made in the blast-furnace and its accessories, as in the hot-blast stoves, the increase in size and change in the shape of the furnace, more efficient blowing-engines, the increased protection given to the bosh walls, and in the careful preparation of the raw material, all of which have exerted a pronounced influence on the furnace operations from a metallurgical standpoint. During the past eight years but little advance has been made in this direction; the fuel consumption has not diminished, nor has there been any material increase in production. Within this period, however, there has been witnessed the greatest development in appliances for the economical handling of material, and so complete has been the work in this direction, that, except in isolated cases, in this country at least, a further extension does not hold out much promise of a satisfactory return on the investment required. It seemed that, with the exception of the gas engine, we had about reached the limit, for like a strong wall the atmosphere, with its humidity as variable to-day as when first blown into a primitive blast-furnace, appeared to stand as a barrier to further progress. In furnaces using ore from the Lake Superior district the raw material, amounting to about 7,200 pounds per ton of iron, varies in composition within 10 per cent. and is as uniform as human skill can make it; but the atmosphere, of which 11,700 pounds are consumed per ton of iron, varies in its content of moisture from 20 to 100 per cent., from day to day and often in the same day, thus rendering the process, even with the best appliances, an uncertain one and dependent on the caprice of the atmosphere.

The desiccation of the air used in

blast-furnaces to such extent as to cause a practical elimination of the moisture, or its reduction to a small quantity, and maintaining it uniform, must of necessity contribute in a very marked degree toward the attainment of uniformity in the furnace operations, and the advantages from desiccation can be appreciated only after due consideration is given to the volume of air that is consumed per minute and the large amount of moisture which it contains. Managers of blast-furnaces are familiar with the chilling effects produced in the hearth by a tuyere that is leaking, which immediately results in a deterioration in the grade of the iron, and yet the quantity of water ordinarily entering the furnace under these conditions is not greatly in excess of the quantity carried in, like a steady stream, by the atmosphere, during a period of the average humid conditions prevailing in the Summer season in this country.

It has been deemed preferable in this communication to express the quantity of moisture contained in the atmosphere as grains of water per cubic foot of air, inasmuch as the quantity of air blown into blast-furnaces is expressed in cubic feet. With air containing 1 grain of water per cubic foot, there is passed into the furnace, for each 1,000 cubic feet used per minute, practically 1 gallon of water per hour. The furnaces of average size in the Pittsburg district consume about 40,000 cubic feet of air per minute, which would pass into the furnace 40 gallons of water per hour for each grain of moisture contained in a cubic foot of air. The quantity of moisture in the air, taken from daily readings by the observer of the United States Weather Bureau at Pittsburg, is set forth in Exhibit I.

Exhibit I.

	Average temperature.	Grains of water per cu. ft. of air.	Gallons of water entering per hour into a furnace using 40,000 cu. ft. of air per minute.
January....	37	2.18	87.2
February...	31.7	1.83	73.2
March.....	47	3.4	136
April.....	51	3.0	120
May.....	61.6	4.8	192
June.....	71.6	5.94	237.6
July.....	76.2	5.6	224
August.....	73.6	5.16	206.4
September..	70.4	5.68	227.2
October.....	56.4	4.0	160
November..	40.4	2.35	94
December..	36.6	2.25	90

The above exhibit, like all records made by the weather bureau, is from observations taken on the top of a high

building, and does not correctly indicate the condition of the atmosphere at the furnaces where the air is used. In fact, at one of the steel works in Pittsburg, observations made simultaneously at three separate stations showed quite a little variation in moisture. For the purpose of comparison with observations of the weather bureau, there is shown in Exhibit II. the average monthly content of moisture in the air at the furnaces, the observations being made at 9 a. m.:

Exhibit II.

	Grains of water per cu. ft. of air.
January.....	2.8
February.....	2.7
March.....	3.1
April.....	3.3
May.....	4.7
June.....	7.3
July.....	7.0
August.....	7.1
September.....	5.4
October.....	3.2
November.....	3.3
December.....	3.0

The variations in moisture from month to month set forth clearly the conditions as to atmosphere with which blast-furnaces in this country have had to contend. If these conditions were uniform throughout the whole month, it would not be a difficult problem to deal with but unfortunately they are not uniform, and it is instructive to note the changes which occur from day to day in same month. In Exhibit III is shown a record worked out from data furnished by the Pittsburg Weather Bureau. These observations represent a different period from that shown in Exhibit I; they were taken at 8 a. m. and 8 p. m., and show the grains of water per cubic foot of air at the time observed, for the months of January and July:

Exhibit III.

Day	JANUARY.		JULY.	
	Grains of Water. 8 a.m.	8 p.m.	Grains of Water. 8 a.m.	8 p.m.
1.....	1.96	3.06	7.24	7.48
2.....	2.55	3.66	8.23	7.98
3.....	2.46	3.80	8.50	7.48
4.....	2.07	2.27	8.50	7.48
5.....	1.81	1.12	8.46	7.72
6.....	.99	1.12	6.50	8.24
7.....	1.16	1.67	8.78	7.47
8.....	1.49	1.88	7.98	7.24
9.....	1.96	2.19	6.78	5.94
10.....	1.81	1.88	7.48	6.35
11.....	1.74	1.55	7.98	7.48
12.....	1.55	1.07	6.73	6.35
13.....	.99	1.55	5.94	4.84
14.....	1.61	1.81	5.55	5.74
15.....	1.67	1.96	5.74	5.19
16.....	2.04	2.27	6.35	6.35

NOTE.—All tons are gross tons of 2,240 pounds, and all temperatures are Fahrenheit.

Day.	JANUARY.		JULY.	
	Grains of Water. 8 a. m.	8 p. m.	Grains of Water. 8 a. m.	8 p. m.
17.....	2.45	3.29	7.72	7.98
18.....	1.81	1.32	7.24	7.24
19.....	1.12	1.16	8.24	7.48
20.....	1.43	2.11	7.48	7.24
21.....	2.11	1.88	7.72	7.38
22.....	1.88	1.88	6.78	5.74
23.....	.91	1.17	7.43	6.35
24.....	.99	2.11	6.66	6.11
25.....	.69	1.83	6.05	7.74
26.....	.61	.99	7.72	7.32
27.....	.56	.88	7.98	7.48
28.....	.72	.70	6.56	5.74
29.....	.76	.80	6.14	5.01
30.....	.95	1.12	5.74	6.35
31.....	.70	1.41	6.56	5.19

It will be observed in the preceding exhibit that, while the moisture in the atmosphere in the month of January is much less than in July, yet the percentage of variation is greater. In order to illustrate more precisely the exact conditions with respect to the atmosphere, under which blast-furnaces must be operated, there is shown in Exhibits IV and V a record of observations taken each hour in the day, and in order not to make the data too burdensome the months of April and October have been selected, as they represent months between the warm and cold seasons, and will also serve for comparison with January and July, as shown in Exhibit III.

It should be stated with reference to the Exhibits IV and V, that observations were taken with a stationary instrument, which shows results somewhat higher, and not as accurate as those taken with a whirled psychrometer. Nevertheless, they were taken with the same instrument and are relatively correct. By simply multiplying the grains of moisture by 40—which represents the number of gallons of water entering a modern furnace per hour, for a content of 1 grain of moisture in a cubic foot of air—a clear idea can be had of the gallons of water entering the

from hour to hour in the same day, and often they are very abrupt. These records were made at a furnace plant, lo-

greater weight of it is used per ton of iron.

It is true that the atmosphere has

Exhibit V.

October	A.M.												P.M.												A.M.				
	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5					
1	5.46	6.18	6.78	6.82	6.27	6.27	6.64	6.39	6.39	7.73	7.73	7.65	8.15	7.65	7.16	7.08	6.32	7.08	6.32	6.72	6.72	7.20	6.18	6.18					
2	7.20	7.92	8.86	9.38	9.02	10.15	10.15	10.15	10.15	10.15	10.15	9.38	10.02	10.02	8.86	8.86	8.86	7.92	7.92	7.92	8.86	8.40	8.40	7.20					
3	7.92	7.92	9.38	9.02	9.57	9.57	9.13	9.13	9.13	10.15	10.15	10.89	10.15	8.54	8.54	8.86	7.92	7.92	7.92	8.86	8.64	9.51	7.92	9.05					
4	9.05	7.92	9.84	9.02	10.15	10.15	10.15	10.89	10.02	10.02	10.02	10.27	9.02	9.02	9.38	9.38	9.02	8.86	8.86	9.05	9.84	9.51	9.84	8.86					
5	8.40	9.61	9.51	8.40	9.51	9.51	9.51	8.86	8.86	8.86	8.86	8.86	9.51	7.64	7.64	7.64	7.92	8.40	6.72	7.92	5.77	5.77	5.77	6.72					
6	5.35	5.35	6.35	5.01	5.80	5.28	4.96	5.59	5.22	5.22	5.59	6.28	5.01	5.35	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11					
7	6.18	6.18	6.78	6.35	6.32	6.32	7.64	7.92	7.92	7.92	7.92	7.92	7.92	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20					
8	7.20	7.20	7.20	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72	6.72					
9	5.46	5.46	6.18	5.35	4.67	4.56	4.55	5.22	4.85	5.22	4.56	5.77	4.40	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11					
10	4.66	5.11	4.75	4.75	6.72	6.72	7.47	7.47	7.15	7.25	7.61	7.47	7.08	7.08	7.08	7.47	7.25	6.71	6.71	6.71	6.71	6.71	6.71	6.71					
11	6.32	6.43	6.71	6.82	6.83	6.39	6.71	5.97	5.35	4.75	4.75	4.75	6.72	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77	5.77					
12	4.31	3.75	4.01	3.81	4.38	3.98	3.71	3.71	3.71	3.98	3.98	3.52	3.52	3.82	3.81	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01					
13	4.31	4.31	4.31	4.01	5.28	5.28	4.85	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47	4.47					
14	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81					
15	3.81	3.46	3.46	3.11	3.11	3.81	3.81	3.62	3.98	3.52	3.52	3.11	3.11	3.11	3.11	4.01	4.01	3.30	3.68	3.68	3.68	3.68	3.68	3.68					
16	3.68	3.68	3.68	4.01	4.11	4.33	4.33	4.33	3.98	3.98	3.98	4.01	3.71	4.40	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01					
17	3.71	3.71	4.40	3.81	3.30	3.84	4.01	4.01	4.01	4.47	4.47	4.47	4.47	3.52	3.84	3.84	3.30	4.24	3.30	3.71	4.54	6.67	4.67	4.33					
18	4.40	4.47	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.11	4.11	4.40	4.11	4.40	4.11	4.40	4.11	4.40	3.71	3.71	3.71	3.71					
19	3.71	3.68	4.01	4.11	3.98	3.71	3.30	2.95	2.95	3.84	3.84	3.98	3.81	4.11	3.71	3.46	3.71	4.01	4.01	4.01	4.01	4.01	4.01	4.01					
20	3.68	3.68	4.01	4.01	4.33	4.56	3.94	4.85	3.82	4.01	4.84	4.24	4.67	4.11	4.11	4.40	4.40	4.40	4.11	4.11	5.01	4.40	4.40	4.40					
21	5.77	5.35	5.77	5.77	6.18	5.77	5.77	5.77	5.77	5.35	6.32	6.01	6.35	6.35	6.77	6.72	6.35	6.56	6.77	6.77	4.40	4.40	4.40	4.40					
22	4.67	3.46	3.46	3.46	3.46	3.11	3.46	3.46	3.46	3.46	3.46	3.52	3.81	3.81	3.52	3.11	3.11	3.81	3.81	3.81	3.81	3.81	3.81	3.81					
23	3.62	3.62	3.17	3.52	2.75	3.52	3.17	3.52	3.17	3.52	3.17	3.52	3.11	3.52	3.11	3.11	3.46	3.46	3.46	3.09	3.71	3.09	3.30	3.30					
24	3.30	3.30	3.71	3.46	4.33	3.98	4.96	4.56	4.24	4.24	4.56	4.67	3.81	4.11	4.11	4.11	4.40	3.71	3.71	3.71	3.71	4.01	4.01	4.01					
25	4.01	3.30	3.71	4.11	4.33	4.24	4.85	4.85	4.01	4.47	3.84	3.98	4.33	4.11	3.46	3.71	3.71	4.01	4.40	4.40	4.11	4.11	4.11	4.11					
26	3.71	3.71	4.66	4.74	2.75	2.75	2.75	3.11	3.46	3.46	3.46	3.46	3.11	3.46	3.11	3.46	3.11	3.46	2.74	2.74	2.74	2.74	2.74	2.74					
27	2.62	2.23	2.52	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.45	2.52	2.74	2.74	2.74	2.74	2.09	3.09	3.09	2.47	2.47	2.47	2.47					
28	3.30	3.30	2.74	3.46	2.75	2.75	2.74	2.94	3.30	3.30	3.30	2.94	2.75	2.74	3.11	3.46	2.74	3.09	3.46	2.74	3.09	3.46	3.09	3.30					
29	2.74	2.74	2.74	3.09	2.75	3.52	3.71	2.95	3.30	3.30	2.58	3.81	3.11	3.11	3.46	3.11	3.46	2.75	3.11	3.11	3.09	3.09	3.09	3.09					
30	3.30	3.46	3.30	3.46	4.01	3.71	3.46	3.46	3.46	3.46	3.11	2.75	3.17	2.75	3.11	3.46	3.46	3.11	3.11	3.11	3.11	3.46	3.46	2.74					
31	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.46	3.46	3.46	2.75	3.46	3.46	3.09	3.09	3.09	3.39	2.77	3.09					

cated on the bank of a river, where the conditions exist for an increase in humidity as compared with higher ground; and to what extent the abrupt changes may have been caused by the presence of steam in the atmosphere—absorbed from spraying of the hot pig beds, the blow-off from boilers and exhaust from engines, or from a rainstorm, when the humidity decreases suddenly—it is impossible to say. How frequently has it happened in the experience of every furnace manager, that the furnace has gradually or suddenly lost its hearth temperature and produced a grade of iron either undesirable or unmarketable, without any visible cause. Tuyeres are examined for leaks, the raw material in the stock-yard is carefully inspected, and usually the coke is condemned. A more intimate acquaintance with the atmosphere would have provided a cor-

been recognized by many metallurgists as the cause of many and serious irregularities in blast-furnace operations, but it is doubtful if its influence has been adequately recognized. Many writers on metallurgical subjects have considered the moisture in the atmosphere, and calculated the absorption of heat necessary for its dissipation—and invariably underestimated; and have dismissed the subject with the conclusion that to extract the moisture the game was not worth the candle, or in a spirit of resignation accepted it—like storm and sunshine—as a condition beyond our control. This conclusion has no doubt been reached by a consideration alone of the quantity of fuel necessary to dissipate the moisture in the furnace hearth, based on observations of the humidity of the atmosphere taken outside the blowing-engine room, and this quantity, while important, does not indicate a great saving in fuel. Of much greater importance is the variation in moisture from time to time and the margin of heat carried in the furnace to compensate for these variations, which margin is invariably large; and every furnace manager is aware of its existence, from the way in which he is required to manipulate the hot-blast temperatures, and from the silicon in the metal, which is the thermometer of the hearth.

It has often been a matter of surprise that a greater saving of fuel per ton of iron was not obtained in the Winter, as compared with the Summer season, as the records show a much less content of moisture in the atmosphere, the reason being that blowing-engines at blast-furnaces do not receive air of the dryness as shown in the exhibits above. In Summer the windows and doors of the blowing-engine room are wide open, and the supply of air, with reference to

Exhibit 1. .

[illegible]

NOTE.—Data in Exhibits IV. and V. represents grains of moisture per cubic foot of air.

furnace per hour, for the various conditions of humidity. The changes are great not only from day to day, but

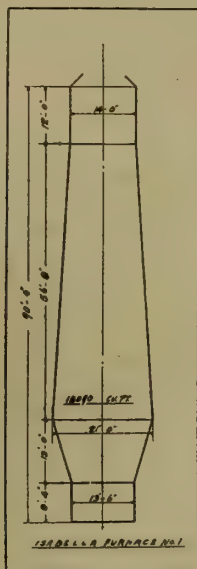
rect and ready reason, for the variations therein are not only many times greater than in the raw material, but a

humidity, is practically that of the atmosphere; but in Winter they are nearly or quite closed, and the entering air has mixed with it all of the steam that

a very great difference in the moisture in atmosphere between observations taken outdoors in Summer and in the engine-room in Winter. In Exhibit VI

are monthly records showing a comparison between Winter and Summer months, the observations having been taken indoors and outdoors respectively.

PLATE I.



leaks from the engine and is contaminated therewith. Records taken over a number of years show that there is not

PLATE II.

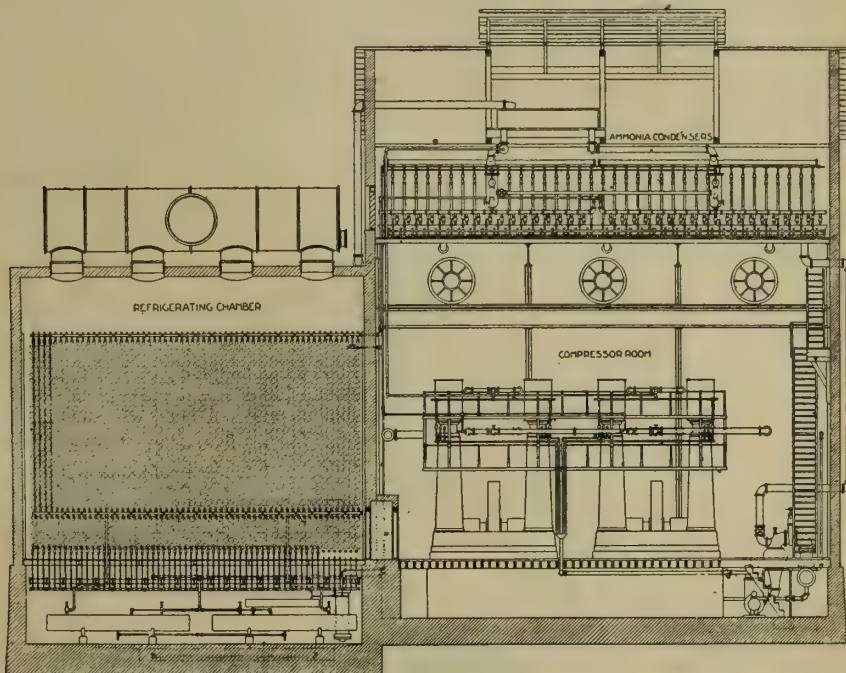
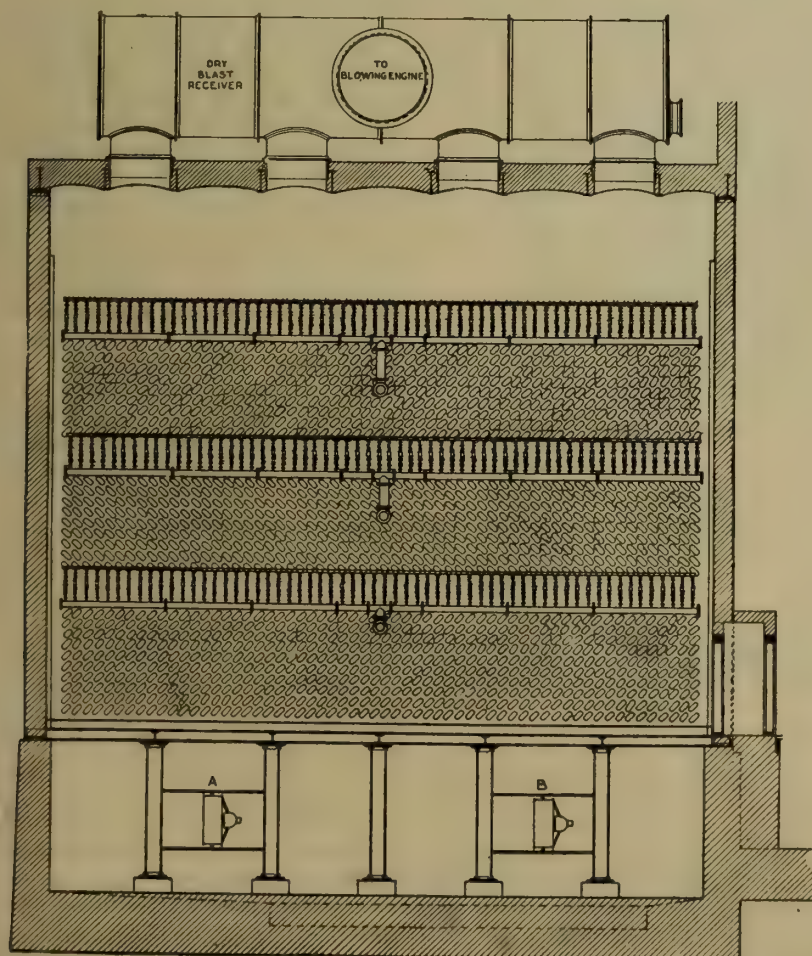


PLATE III.



REFRIGERATING CHAMBER.

Exhibit VI.

WINTER.		SUMMER.	
Month.	Grains of water per cu. ft. of air.	Month.	Grains of water per cu. ft. of air.
January...	4.5	April.....	4.2
February...	4.6	May.....	4.1
March.....	4.7	June.....	6.4
October....	6.4	July.....	5.2
November..	4.6	August....	6.7
December..	5.0	September.	5.7

A comparison of the data given in Exhibit VI with Exhibit II would suggest that a great advantage could be derived by leading pipes from outdoors to the inlet-valves of the air-cylinder, and it certainly appears that a material advantage could be gained. So impressed was the writer with this conclusion that the blowing-engines at a furnace under his direction were so equipped in the month of January, and continued to draw the supply of air from outdoors throughout the year. The excellent results expected in the Winter season did not materialize, or rather were so slight, as compared with a companion furnace not so equipped, as to argue against any extension along that line. This experience suggested the conclusion that while the air in the engine-room was higher in its content of moisture, through its admixture with steam, than the outside air, yet it was not subject to the same variations; and further that these variations, which were often sudden and great, were really the most troublesome feature, and that nothing less than maintaining the atmosphere uniform with respect to humidity would prove of any material advantage. The saving in fuel through such uniformity

could not be accurately set forth. The amount of fuel necessary for the decomposition of the moisture in the blast can be closely arrived at, but to what extent that which might be designated as the surplus of heat, utilized for counteracting the variations in moisture, could be diminished, must of necessity be an approximation, as there existed no tangible data for estimating it. Nevertheless, the saving therein was deemed to be considerable.

It may reasonably be assumed that in order to determine the most feasible

size to treat the air from a blowing cylinder 3 feet in diameter, was built. A small ice-machine was installed to circulate the ammonia through the coils, and the air was admitted to the refrigerating chamber from an auxiliary chamber in which steam could be introduced at will, thus making it possible to treat, at any time, air containing the maximum amount of moisture with which it would be necessary to contend in the Summer months. In this experimental plant air was treated under a variety of conditions for quite a period,

and the usual construction of furnaces in the Pittsburgh district. The furnace is blown with twelve 6-inch tuyeres, and is equipped with four hot-blast stoves. Blast is supplied by three blowing-engines having the following dimensions: Steam-cylinder, 44 inches diameter; air-cylinder, 84 inches; stroke, 60 inches.

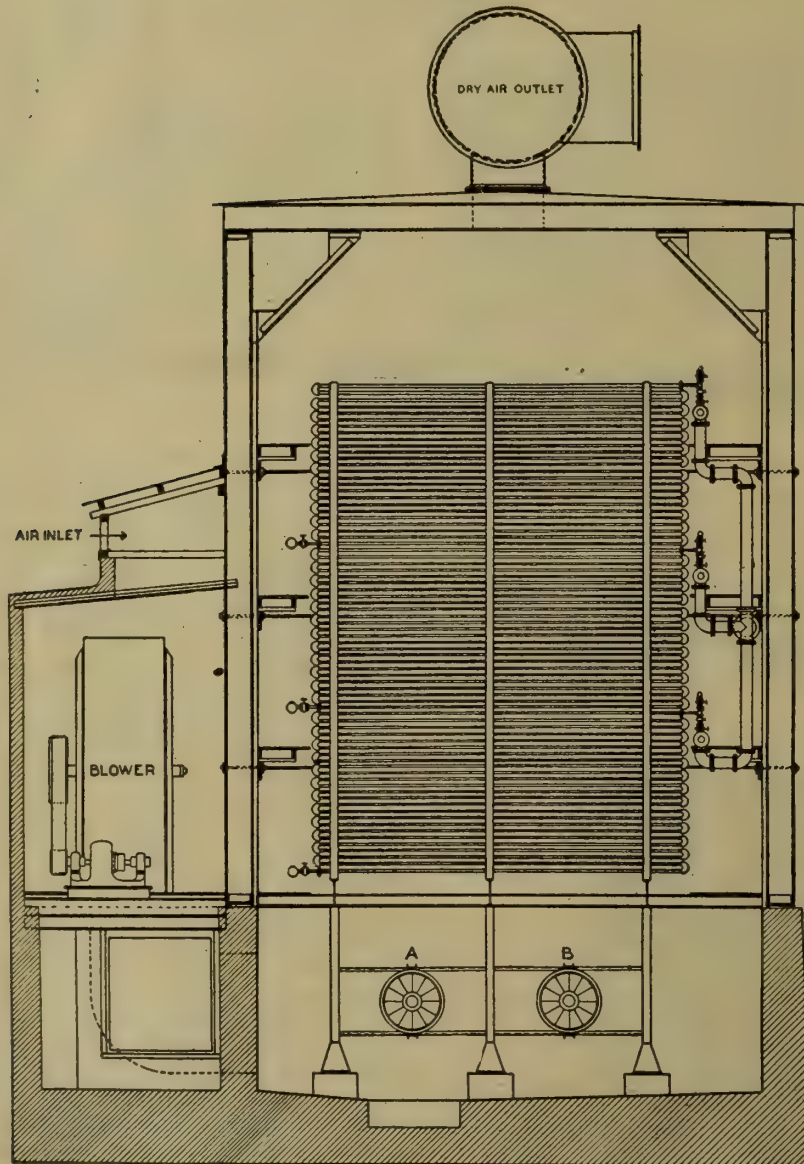
In Plate II there is shown in elevation the ammonia compressors, condensers, and the refrigerating chamber. This view of the refrigerating chamber shows it to be connected for the direct expansion of ammonia, but as the escape of ammonia gas through a broken pipe or leaking joint might imperil the life of anyone in the chamber at the time, it was decided to adopt the brine system, and the pipe connections are as shown in Plates III and IV, representing the refrigerating chamber in end view and vertical section. The refrigerating chamber is lined on the insides with plates of compressed cork 2 inches thick.

The ammonia machines are of the compressor type, and were built by the York Mig. Co., York, Pa. The dimensions are as follows: Diameter high-pressure steam-cylinder, 28½ inches; low-pressure, 56 inches; compressor cylinder, 22½ inches; stroke, 36 inches. Two compressors were installed in order to have one in reserve at all times, as a furnace operating on uniformly dry air cannot be subjected to ordinary atmospheric conditions without serious results, and frequently on very humid days the assistance of the second engine might be required. Each compressor has a capacity of 225 tons ice melting effect.

Plate V shows the brine-tank, in which are twenty coils of pipe of the dimensions shown in the diagram. The coils are covered with calcium chloride brine having a sp. gr. of 1.21. The return brine from the refrigerating chamber flows into the top of the tank, is cooled by the ammonia expanding between the outer and inner pipes, withdrawn therefrom by a pump and forced back through the pipe marked "brine-inlet" into the 2-inch or inner pipes, where it is cooled below the freezing-point, and thence into the coils in the refrigerating chamber. The ammonia enters at the bottom of the pipes, thus traveling in the opposite direction from the brine, and by expanding between the 2-inch and 3-inch pipe cools the brine both in the tank and in the inner pipes. Forty thousand gallons of brine are required in the system.

In Plates III and IV is shown the arrangement of pipes in the refrigerating chamber. There are in each vertical line of coils seventy-five 2-inch pipes 20 feet long, and in the chamber there are sixty vertical lines of coil, the whole representing 90,000 lineal feet of 2-inch

PLATE IV.



REFRIGERATING CHAMBER.

method and apparatus for extracting the moisture, a wide field of experiment must be covered. Various schemes for absorbing the moisture were worked out and in turn abandoned, and refrigeration by means of anhydrous ammonia was chosen. After many preliminary experiments an insulated chamber containing coils of pipe, and of sufficient

and from the data obtained the equipment for a modern furnace was worked out.

The Isabella furnaces of the Carnegie Steel Co., located at Etna, Pa., a suburb of Pittsburgh, were selected as the plant at which to install the apparatus for applying the dry-air blast.

The lines and dimensions of this furn-

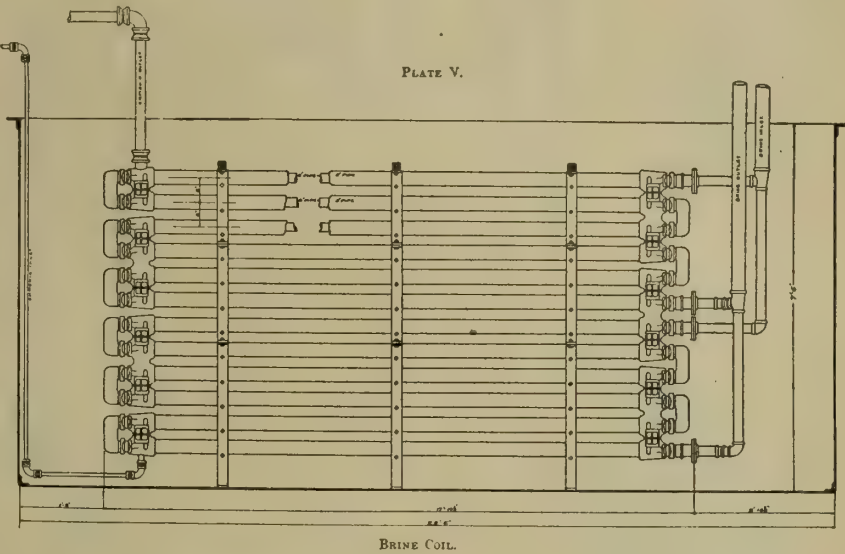
pipe in the chamber. The pipes in each vertical coil are placed in staggered position to insure better contact with the air. The series of coils is divided into three sections and fed through a 4-inch header, and discharges into a 3-inch header, thence into a standpipe, from which the brine flows to the brine-tank, its feed being arranged to cause the brine to flow in a direction opposite to that of the air. As the space between the pipes would become gradually reduced through the accumulation of frost, which might diminish the efficiency of the blowing-engine, a blower was installed to force air into the refrigerating chamber, and in order to secure a uniform distribution of air over the coils revolving electric fans (marked 1 and 2) were placed in the space underneath, so that all of the coils would frost alike. The entering air, according to its humidity, deposits the moisture in the form of water or frost on the lower pipes and as frost only on the upper pipes, and passes from the top of the chamber to the blowing-engines at a temperature of freezing or below and with a practically uniform content of moisture. When the pipes become covered with frost the cold brine is shut off from several vertical lines of coil at a time, and through an auxiliary pump and line of pipe brine that has been heated in a tank with steam is forced through, and in a few minutes the frost is melted. Connection is then made with the cold-brine system, and frost begins to deposit quickly. The frost which has been melted off the pipes collects in a trough in the basement floor, from which it flows into the supply-tank for the condenser.

The dry-blast plant is constructed

of necessity be as ample in capacity and as substantial in construction as any of the present day accessories of the furnace stack.

The dry-blast plant was put in operation on August 11, 1904. The furnace was making a grade of iron suitable for

those from August 1st to 11th, when the furnace was using the atmosphere under ordinary conditions. A comparison with the previous month would show a greater economy in coke, but since a change was made in the ore mixture in the latter part of July—which gave a



the basic open hearth furnace, containing less than 1 per cent. silicon, with an ore mixture consisting of 50 per cent. Mesaba ore, the balance being soft hematites from Michigan. The mixture showed a yield by analysis of 53.5 per cent. iron. The coke used was shipped from two mines and contained on an average 10.5 per cent. and 12.5 per cent. of ash respectively, and also varied considerably in ash. In order to obtain correct data from the use of the dry-blast, it was determined beforehand that no changes in any particular were to be

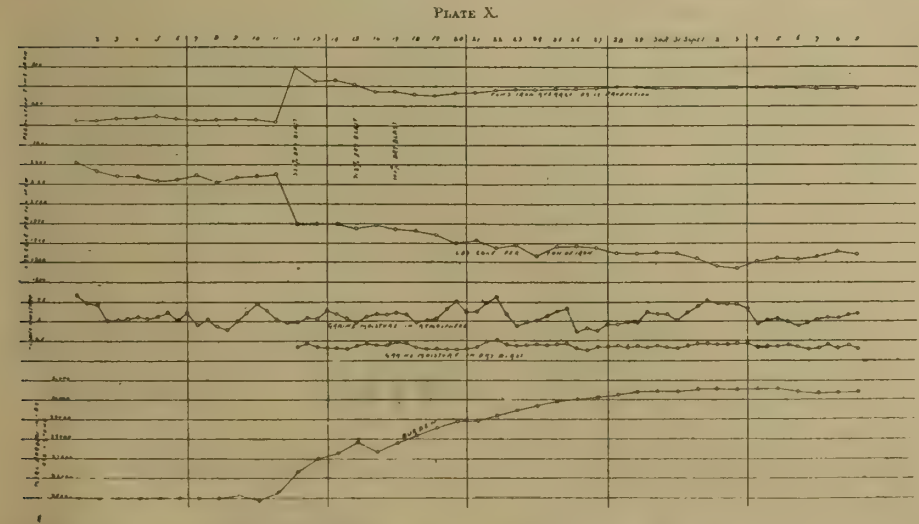
lower coke consumption per ton of iron—a comparison of data when using dry air with that obtained in August prior to its use, and with the same ore mixture, would more accurately show the benefits derived. The burden on the furnace from August 1st to 11th inclusive was as follows:

	Pounds.
Coke.....	10,200
Ore.....	20,000
Stone.....	5,000

On August 11th 5 per cent. increase in burden was put on the furnace and later in the day 33 per cent. of dry-blast was used. As soon as this small quantity was introduced its effect was noticeable by a brightening of the tuyeres and an increasing temperature of the cinder. After this change in burden had come to work and the condition of the furnace showing, if anything, more satisfactory, an additional 5 per cent. of burden was put on with confidence, feeling assured that an increased use of dry-blast would offset the increased duty on the furnace. From this period on, the burden and volume of dry-blast were increased more slowly until, on August 25th, the furnace using dry-blast entirely, had the following burden at work:

	Pounds.
Coke.....	10,200
Ore.....	24,000
Stone.....	6,000

thus in two weeks obtaining an increase in burden of 20 per cent. The record of the furnace from August 1st to 11th, prior to the use of the dry-blast, and from August 25th to September 9th in-



throughout in the most substantial manner, for it is obvious that an apparatus treating such an important element of the process as the atmosphere could not be practically applied to a modern furnace in an experimental way, but must

made in the operation of the furnace, other than the introduction of dry air, and this has been rigidly adhered to. In the data following a comparison is made between the operations of the furnace using dry air after August 11th and

clusive, using all dry-blast, is shown in Exhibit VII:

WITHOUT DRY-BLAST.		WITH DRY BLAST.	
Pro- duct. Tons.	Coke consump- tion. Lbs.	Pro- duct. Tons.	Coke Consump- tion. Lbs.
Aug. 1.. 300	2,210	Aug. 25.. 462	1,766
" 2.. 367	3,112	" 26.. 441	1,850
" 3.. 372	2,084	" 27.. 477	1,668
" 4.. 373	2,133	" 28.. 516	1,462
" 5.. 386	2,008	" 29.. 405	1,763
" 6.. 340	2,280	" 30.. 441	1,804
" 7.. 347	2,116	" 31.. 462	1,722
" 8.. 360	2,012	Sept. 1.. 472	1,729
" 9.. 378	2,114	" 2.. 472	1,642
" 10.. 352	2,318	" 3.. 458	1,648
" 11.. 306	2,266	" 4.. 421	1,841
		" 5.. 450	1,813
Average. 358	2,147	" 6.. 400	1,683
		" 7.. 400	1,734
		" 8.. 397	1,952
		" 9.. 472	1,642
		Average. 447	1,726

In Plate X there is graphically set forth the record of furnace operations from August 1st to September 9th inclusive. This shows the increase in output and reduction in coke consumption corresponding to the increase in burden. There is also shown the varying conditions of humidity from day to day, which represent the average humidity for each twelve-hour period, and the change in humidity after being treated in the dry-blast apparatus. While the reduction in moisture and its increase in uniformity is considerable, it should not be lost sight of that this represents the beginning of operations, and there was still much to be learned with respect to manipulation of the dry-blast plant.

The effect of reducing and making more uniform the moisture in the blast was clearly shown when, during a period of excessive humidity extending over three days, a neighboring furnace charged during this period an extra quantity of coke and increased the quantity each day in order to maintain the grade of iron, while the Isabella furnace, operating on dry-blast, was in no wise affected.

On September 10th it was found necessary to make some repairs to the compressor and to make connections to a new brine-header for thawing off the coils, and the burden was lightened accordingly. After these repairs had been made the burden was again increased, and from September 17th to 30th inclusive the furnace showed an average daily output of 452 tons, with a coke consumption of 1,729 pounds per ton of iron.

In order to show what changes have been made in the atmosphere by passing it through a refrigerating chamber, the following daily records of operations, as set forth in Exhibit VIII, will give a very clear idea.

During a period of thirteen days the average moisture in the atmosphere was 5.66 grains per cu. ft. and in the dry air 1.75 grains. Sixty-nine pounds of

water were removed from the blast per ton of iron produced, which represents an average of 23,192 pounds (equivalent to 2,784 gallons) for the twenty-four hours. This weight was calculated from the volume of air blown into the furnace, as shown by piston displacement. For four days during the above period the water caught in the tank underneath the refrigerating chamber amounted to an average of 21,561 pounds (equivalent to 2,588 gallons) for the twenty-four

revolutions per minute of the blowing-engines burned nearly 1 per cent. more coke and produced 89 tons more pig-iron in twenty-four hours than 114 revolutions on natural air. The reduction in the revolutions resulted in a gain of 150 degrees in temperature of the blast, which even with this increase, through lack of area in the waste gas ports of the stove, did not average above 870 degrees.

The average analysis of the gas for

Exhibit VIII.—Refrigerating Chamber.

Time.	Temper- ature		Grains of water per cu. ft. of air.		Temper- ature.	Grains of water per cu. ft. of air.		Temper- ature.	Grains of water per cu. ft. of air.			
	Inlet.	Outlet.	Inlet.	Outlet.		Inlet.	Outlet.		Inlet.	Outlet.		
6 a.m.	68	21	5.19	1.33	70	22	6.35	1.70	77	22	3.94	1.48
7 a.m.	68	20	5.02	1.24	71	22	6.78	1.77	.....	.....	4.08	1.29
8 a.m.	70	20	5.56	1.55	69	22	6.67	1.62	.....	.....	4.22	1.42
9 a.m.	73	20	5.37	1.46	73	22	6.78	1.70	71	25	4.85	1.36
10 a.m.	74	20	5.47	1.81	74	22	6.78	1.70	.....	.....	5.02	1.48
11 a.m.	77	20	5.56	1.53	77	23	6.67	1.70	.....	.....	5.19	1.55
12 m.	77	21	6.04	1.53	81	23	6.56	1.62	81	28	5.37	1.70
1 p.m.	80	21	6.04	1.42	78	24	6.56	1.70	.....	.....	4.85	1.62
2 p.m.	81	22	6.14	1.60	82	25	6.56	1.90	.....	.....	4.85	1.62
3 p.m.	81	23	5.74	1.60	81	24	6.19	1.74	84	29	5.02	1.70
4 p.m.	82	23	5.74	1.55	81	24	6.19	1.42	.....	.....	4.68	1.48
5 p.m.	82	22	6.04	1.62	80	24	6.14	1.48	.....	.....	4.85	1.60
6 p.m.	81	23	5.94	1.55	75	24	5.56	1.55	78	29	5.37	1.77
7 p.m.	80	23	5.74	1.62	72	24	5.94	1.70	.....	.....	5.37	1.62
8 p.m.	79	24	5.94	1.55	70	23	5.19	1.62	.....	.....	5.56	1.70
9 p.m.	73	23	7.01	1.85	69	22	5.19	1.42	72	29	5.74	1.70
10 p.m.	73	22	6.78	1.70	68	21	5.19	1.55	.....	.....	5.74	1.77
11 p.m.	73	23	6.78	1.70	66	20	3.94	1.77	.....	.....	5.74	1.62
12 ngt.	73	23	7.01	1.70	62	20	3.54	1.62	66	28	5.56	1.70
1 a.m.	73	23	6.78	1.70	59	18	3.41	1.42	.....	.....	4.85	1.70
2 a.m.	74	23	7.01	1.70	57	17	3.54	1.13	.....	.....	5.37	1.70
3 a.m.	73	23	6.78	1.70	56	16	3.18	1.13	64	27	5.19	1.48
4 a.m.	73	23	6.78	1.48	56	16	3.18	0.99	.....	.....	5.19	1.36
5 a.m.	73	23	6.78	1.48	53	14	2.85	1.06	.....	.....	4.85	1.48

hours, which is as close an agreement as could be expected, considering that the figures do not represent the same number of days, and the difficulty in accurately determining the volume and humidity of the air supplied in a given period. It is found sufficient in practice to thaw the frost off the pipes every three days. The coils are divided, for the purpose of thawing off, into three sections, each representing the same number of coils, and a section is thawed each day, and in this way the work of refrigeration is not interfered with.

As the dry-blast was supplied to the furnace it became necessary to reduce the revolutions of the blowing-engines, since the air supplied to the engines was lower in temperature than with the natural atmosphere and contained more oxygen per cu. ft., and the tendency of the furnace was to drive too fast. Before applying the dry-blast the engines were running at 114 revolutions and supplying 40,000 cu. ft. of air per minute; the revolutions were gradually reduced to 96, thereby reducing the volume of blast over 6,000 cu. ft. per minute, and increasing the efficiency of the engines by 14 per cent. With dried blast, 96

ten days prior to the introduction of the dry-blast showed CO, 22.3 per cent.; CO₂ 13 per cent., with an average temperature of 538 degrees. Later, with dry-blast used entirely, the average analysis was CO, 19.9 per cent.; CO₂ 16 per cent., with an average temperature of 376 degrees. This reduction in temperature of 162 degrees is a necessary consequence of the greater concentration of heat in the hearth by the dry-blast combustion and the greater weight of burden heated by the gas, and repre-

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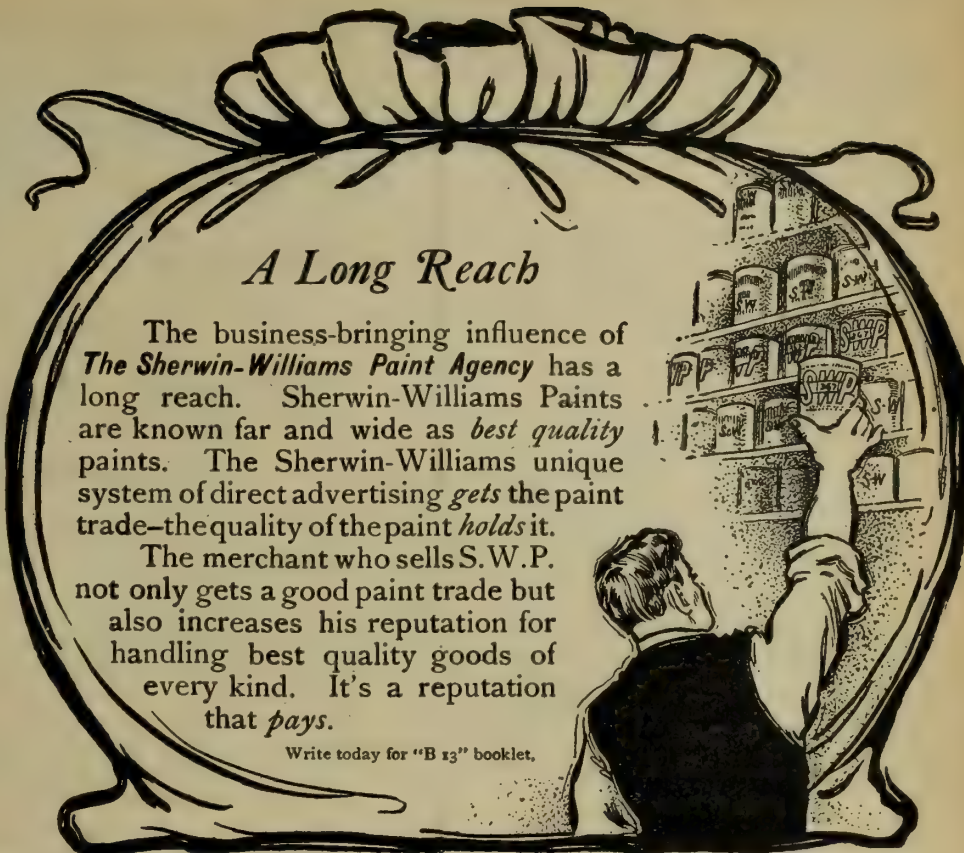
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sents an important saving of heat in the furnace.

The use of the dry-blast has resulted in economies in several other directions. With the use of Mesaba ore, which is very fine in structure, the waste of ore dust through the escaping gases is quite large, and at many furnaces the waste in ore has become quite burdensome. The waste at the Isabella furnace before dry-blast was used amounted to 5 per cent. of the ore charged; this has been reduced, through the greater uniformity in the furnace working, to less than 1 per cent.

The saving in coke consumption reduces the phosphorus in the metal, and this, in making Bessemer iron, permits the use of higher phosphorus ores. As the Isabella furnace was making basic iron, it was of advantage to keep the silicon as low as possible, provided the sulphur was kept low, and the absence of irregularities in the furnace operations resulting from the dry-blast permitted the keeping of the silicon at a lower range without increasing the sulphur. It has been generally observed by furnace managers that when the silicon is lowered through increased humidity in the atmosphere, a leaking tuyere, or through other causes, the sulphur is rapidly increased; but it has been found in using the dry-blast, that when the hearth temperature was suddenly lowered, principally from accretions on the bosh reaching the hearth, the sulphur did not increase, and in this respect the furnace has shown a remarkable uniformity in composition of the metal produced.

Mention has been made of the saving effected in the blowing-engines through a reduction in the number of the revolutions, and this saving has an important bearing on the expenditure for power in operating the machines in the dry-blast plant. Prior to the use of the dry-blast plant, the blowing-engines were indicated and the average H. P. developed by each engine was 900 I. H. P. From the cards taken when the furnace was supplied with dry-blast, the average I. H. P. was 671, a difference of 229 H. P. per engine, which aggregates 687 I. H. P. for the three engines. Cards were also taken from the ammonia compressors, the compression and back pressure being kept as nearly as possible to the best working condition. When running at 45 revolutions, which would probably represent the average for the year, each engine developed 230 I. H. P., or 460 H. P. for the two engines; the fans together with the brine and water-pumps are well covered by allowing for them 75 H. P., making a total of 535 H. P. Comparing this with the power saved in the blowing-engine room, there appears an excess above that required for operating the dry-blast plant. These figures, however, may not represent accu-



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ately the difference in power consumption, as the blowing-engines were indicated at different times and the first test was taken with a blast-pressure on the furnace of 17 pounds, while the test made with the dry-blast was 15 pounds, and the figures given above might require some modification, as the effect of dry-blast on blast-pressure is not yet fully determined. The increase of uniformity in the working of the furnace, which is obtained through the dry-blast, would result in a decrease in the blast-pressure, and it would appear in any event that the saving in power consumption nearly or quite compensate for the reduction in the blowing-engine room would requirements at the dry-blast plant.

The application of the dry-blast to the blast-furnace has shown, in addition to the economies effected, that the furnace can be operated with precision; it works with greater regularity, and in consequence the product is uniform with respect to grade and composition, which

makes the dry-blast of particular value in the making of foundry iron, which is marketed by grade. An increase or decrease in blast temperature has a definite effect and can be relied on to accomplish the desired result.

The dry-blast plant since it was started on August 11th has been in regular operation. It started without a hitch and no difficulties have developed in any direction. Some modification in construction has been indicated as the result of the operation of the plant which would further reduce the moisture and add to its uniformity, but so far the changes suggested have been slight.

While the application of the dry-blast to the blast-furnace has effected various economies and produced a more uniform metal, its further application to the Bessemer converter would no doubt result in great benefit, since air is used in large quantities and the varying humidity affects the temperature of the charge and in consequence the quality of

the steel. The metal from the metal-mixer is remarkably uniform and the additional uniformity secured through the use of dry air would be of further advantage. It happens that a higher silicon is required in the Summer months to maintain the temperature of the blow, in which period it is also more expensive to maintain the right amount of silicon in the pig-iron. With the use of the dry-blast in the converter the proper temperature could be secured with a lower silicon in the metal, and this in turn would further reduce the coke consumption at the furnaces. In other processes where air is used in large quantities—particularly in smelters and copper converters and in the open-hearth furnace and in cupolas—it would appear that the use of dry-air would effect important economies.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Something Pneumatic.

"Something Pneumatic" for October, published by the Chicago Pneumatic Tool Co., contains several very interesting articles. Among them is "Pneumatic Tools for Eastern Countries," a reprint from the Indian and Eastern Engineer. Another article of interest is "Mechanical Appliances in Modern Shipbuilding," by Waldon Fawcett, which is intended to show how modern devices are working a revolution in the shipbuilding industry. There is also a description of the construction of the Minnesota from beginning to end.

Canadian Westinghouse Co., Limited.

The Canadian Westinghouse Co., Limited, Hamilton, Ont., are sending out a bulletin on type CC small induction motors, and two small booklets describing type S direct current motors and type C for alternating current.

No other type of motor is so simple and so substantial in construction as the induction type. The motor described in the bulletin is the single phase type. The stator is built up of laminated steel punchings held between end rings and is carried within a circular yoke of cast iron. The rotor is formed of a circular core with partially closed slots, built up on a cast iron spider, which is pressed on and keyed to the motor shaft. The machine is closed in with end brackets which are centred on and bolted to the yoke, and which carry the sup-



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The type S motor is designed for motor driving. The type C motors are of the induction type, single-phase.

Goulds Power Pumps.

The Goulds Mfg. Co., Seneca Falls, U.S.A., are sending out a neat little catalogue describing and illustrating their triplex power pump, of which they are the originators, and also other pumps. This firm claim that the triplex power pump is superseding the direct-acting steam pump for every service because of its high efficiency and low cost of operation. These pumps are furnished with several styles of drives, including both motor and gasoline engine, the motor being connected through gearing or through belt and the gasoline engine direct connected through friction clutch and intermediate gearing. Goulds double-acting power working head pump, power differential working head pump and rotary pumps of different kinds are

also described and illustrated. Readers of *Hardware and Metal* interested in pumps may secure one of these catalogues by applying to the firm.

Driving the New York Subway.

The Ingersoll-Sergeant Drill Co., New York, have issued a handsome little booklet, entitled "The Driving of the New York Subway," which gives a short description of the driving of the subway in which the pneumatic rock drills of this company played an important part. The booklet is handsomely illustrated, and interesting figures of the amount of work done in driving the subway are given. It is a handy little book of reference regarding the New York subway.

Glue Talk.

"Glue Talk" for November, published by the American Tanners Glue Co., contains some interesting articles, besides the usual number of amusing and comical ones. One of these is entitled the "Undiscovered Elements of Glue," which deals with the elements and manufacture of glue.

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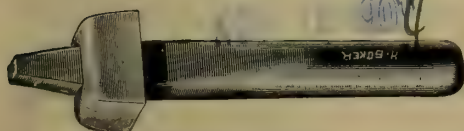
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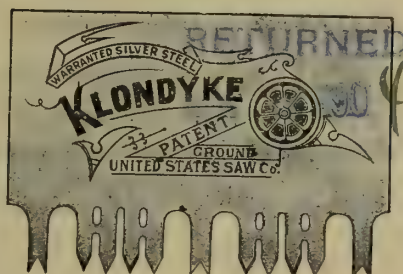
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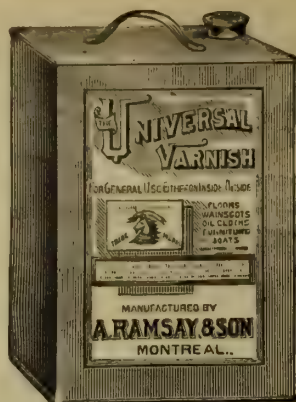
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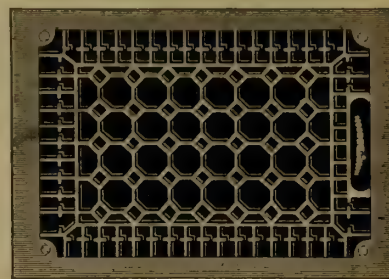
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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Nov. 11, 1904.

BUYERS of heating and plumbing apparatus seem to be the only ones unaffected by the feeling of lethargy that has prevailed in most circles within the last few days. Probably the exigencies of the case have to do with this as it is known that in no

other line is the demand so urgent at the present time. There is a snap and vim to this market which stands out in strong contrast to most others. Large and heavy shipments are being made both east and west, and the plumber more than any other seems fully alive to the saving effected by getting in goods before the close of navigation. Prices remain unchanged. Some sizes of iron pipe are scarce and the market continues active.

Range Boilers—There is still a very active market and many orders for these have been placed within the past few days, especially for distant shipment. Quotations are as follows: Iron clad 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—It was fully expected that lead pipe would have advanced since last quotations, but no such change has taken place. The market is active. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—These lines are hardly as brisk as other plumbing goods. Our quotations are as follows: Soil pipe, standard, 50 per cent and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—Fair sales have been reported with no unusual activity. Discounts quoted on all sizes of nipples up to six inch, 67 1-2 to 70 per cent.

Iron Pipe—As is usual at this time of the year, there is a shortage in iron pipe. Some cutting is still being done, but on the whole the market is a little steadier. There is a big demand. Our quotations are as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.85; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in.,

\$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Nov. 11, 1904.

THE exceptionally strong trade in local circles still continues and the anticipation is there will be no falling off until the weather becomes unquestionably cold. The trade of Manitoba and the Northwest Territories has never been equalled and all the dealers are of the opinion that between 35 and 50 per cent. of the trade went to this portion of the country.

As the price of iron in the pig state is advancing dealers are expecting an advance in iron pipe also. The rumor is still current that the manufacturers of iron pipe at Guelph and Montreal are trying to fix a standard price, but up to date nothing officially has been announced. With the exception of the firmness of iron pipe and iron fittings the conditions remain practically unchanged.

Lead Pipe—A good trade continues at steady prices. Our quotations are: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—An increase of 5 per cent. is noted in the discount on headers and nipples. Prices are

steady. We quote nominally: Malleable fittings 20 per cent for American and 35 per cent. for Canadian; cast iron (standard), 65 per cent.; headers, 60 per cent.; flanged unions, 60 per cent.; malleable bushings, 57 1-2 per cent.; cast iron bushings, 70 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A steady demand continues with the discount unchanged at 15 per cent.

Iron Pipe—Reports state better conditions. The demand increases. An advance in prices is anticipated. Our quotations are as follows: Black, 1-4 inch. \$1.97; 3-8 inch, \$2.10; 1-2 in., \$2.28; 3-4 in., \$2.86; 1 in., \$4.10; 1 1-4 in., \$5.62; 1 1-2 in., \$6.72; 2 in., \$8.98. Galvanized, 1-4 in., \$2.80; 3-8 in. \$2.96; 1-2 in., \$3.14; 3-4 in., \$4.01; 1 in., \$5.75; 1 1-4 in., \$7.85; 1 1-2 in., \$9.43; 2 in., \$12.57.

Solder—The market is firm owing to the increased strength of tin, but prices are unchanged. Bar solder is quoted at 17 1-2c and wire at 18c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 5 1-2 feet, 21-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 21-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D, A quality, \$5.40; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

An Expert in Charge.

JOHN P. HOCKIN has been appointed to the position of general superintendent of the new establishment for the manufacture of hot water and steam heating apparatus, radiators, boilers, etc., which the Taylor-Forbes Co., Guelph, are erecting in connection with their present plant, and has entered upon his duties.

Mr. Hockin's return to Guelph, his old home, will be a matter of pleasure to his many friends, amongst whom he will receive a cordial welcome. The incoming superintendent will also have an interest in the business. Mr. Hockin learned his business as machinist with the late Thos. Worswick and was associated for fourteen years as master mechanic and designer in the Dominion Radiator Works at Toronto, with J. M. Taylor, of the Taylor-Forbes Co., and latterly has been general superintendent of the works.

On leaving the Dominion Radiator

Co.'s employ on Saturday evening Mr. Hockin was presented by the employees with a roll top desk, book case and swivel library chair, as a token of the good feeling between himself and the employees and their regret at parting with him. Mr. Hockin also expressed his regret, but spoke also of his pleasure in returning to his old home and to old business associates.—Guelph Herald.

Plumbers' Association Will Meet November 17.

AT a recent meeting of the Executive Committee of the Provincial Association of Master Plumbers the advisability of selecting a more central place of meeting came up, and after due consideration, Toronto was selected.

The meetings will be held on Thanksgiving Day, Thursday, November 17, in the rooms of the Toronto Association, 21 Richmond street west, morning session opening at 9.30.

The Executive Committee meet on Wednesday evening at 8 o'clock and are preparing a very important report to come before the convention.

An urgent request is extended to all master plumbers throughout the province to attend the convention.

The time for holding the convention is very opportune, as single return fares will prevail on the railways.

Anyone desiring any further information can procure same by addressing the secretary, W. H. Meredith, 21 Richmond street west, Toronto.

Building Notes.

Toronto Junction is considering a new Carnegie library.

The Town of Wingham, Ontario, is to have two new steel bridges.

Work has begun on the new \$14,000 hotel, which is to be erected at Kemptville.

Calgary is to have a new Y. M. C. A. building, which will cost in the neighborhood of \$40,000.

Tenders are being invited for the new Canadian Bank of Commerce building which is to be erected at Hamilton.

The steel bridge in course of erection by the Dominion Bridge Co., Limited, for the Levis (Que.) electric road, is almost completed.

The mill of the Laurie Lumber Co., at Marysville, was recently destroyed by fire; loss is estimated at \$5,000, with \$2,500 insurance.

A modern hotel is to be erected at Sturgeon Point, to accommodate tourists in the Kawartha Lakes district. The new hotel will be constructed by Dr. Ryerson, of Toronto; J. A. Bucknell, of New York; W. T. C. Boyd, of Bobcaygeon, and J. D. Flavelle and Thomas Stewart, of Lindsay. In addition to the hotel a number of cottages will be put up.

Building Permits.

MONTREAL.

T. Quintal, Panet street, one house, \$3,000.

Chas. Meredith, Pine avenue, one residence, \$35,000.

F. Alexander, St. Hubert street, two dwellings, \$1,500.

N. Pageau, St. Catherine street, one house and store, \$12,000.

N. Eeptie, Christopher Columbus street, two dwellings, \$1,500.

Desnoyers & Varin, Aylwin street, alteration on factory, \$1,000.

Lafontaine Club, St. Hubert and Dorchester streets, alteration on club house, \$2,200.

TORONTO.

C. M. Essery, foundry, No. 114 Jarvis street, \$2,500.

E. Hooper, dwellings, Abbs street, near Brock, \$2,400.

J. J. Walsh, stores, Nos. 174 and 176 Victoria street, \$2,000.

W. R. Payne, dwellings, Nos. 8 and 10 Givens street, \$5,000.

Eastmure & Lightbourn, No. 65 Adelaide street east, \$1,000.

Ellen Read, store and dwelling, No. 802 Yonge street, \$1,700.

John J. Clark, dwelling, Front street, near Water street, \$1,000.

H. Tomlin, stable, Bathurst street, near College street, \$5,000.

H. W. Love, dwellings, First avenue, near Bolton avenue, \$2,800.

J. T. May, dwellings, Delaware avenue near College street, \$3,500.

L. J. Bland, dwellings, Nos. 144 and 144 1/2 Howland road, \$4,500.

A. E. Peglar, dwelling, Gerrard street, near Logan avenue, \$1,300.

W. J. Clark, dwelling, College street, near Concord avenue, \$4,500.

Sisters of St. Joseph, lavatory at Sunnyside orphanage, \$2,300.

A. Elliott, dwellings, Nos. 163 and 165 Cottingham street, \$6,000.

W. Pincock, dwellings, Gore Vale avenue, near Arthur street, \$3,500.

L. Cosgrave, alterations to dwelling at No. 565 Jarvis street, \$2,500.

F. H. Squires, dwellings, Euclid avenue, near Harbord street, \$9,000.

Thos. McIlwain, dwellings, Nos. 77 and 79 Sorauren avenue, \$5,500.

Thomas Ratcliffe, dwelling, Pape avenue, near Dagmar avenue, \$1,400.

Mrs. A. Neate, dwellings, Albany avenue, near Vanhorne street, \$2,500.

Edward Taylor, dwellings, Nos. 196 and 198 Delaware avenue, \$3,000.

W. J. Hewitt, dwellings, Langley avenue, near Howland road, \$3,000.

Thos. W. Woods, dwelling, Crawford street, near Bloor street, \$1,000.

Dr. D. McPherson, dwellings, Bathurst street, near Ulster street, \$6,000.

Charles Jolliffe, dwellings, Grace street, near College street, \$5,000.

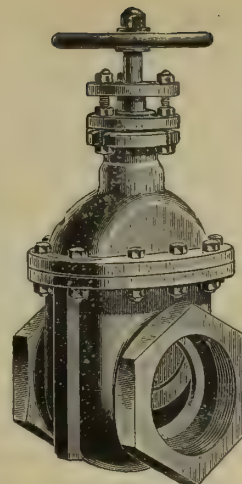
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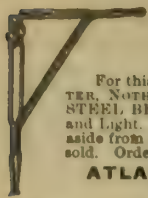


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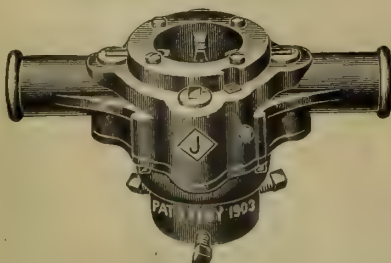
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C. S. MacInnis, dwelling, Admiral road, near Lowther avenue, \$7,000.

The Lamb estate, dwellings, Lamb avenue, near Amelia street, \$6,000.

A. S. Stewart, dwellings, Symington avenue, near Royce avenue, \$1,600.

R. S. Williams, Jr., dwelling, Cluny avenue, near Crescent Road, \$8,000.

James I. Scott, dwellings, Dupont street, near Davenport road, \$4,500.

Pittet & Pittet, dwellings, Queen street, near Brooklyn avenue, \$1,800.

Stephen Smith, dwelling, Brooklyn avenue, near Brighton avenue, \$1,600.

Pike and Elliott, dwellings, Markham avenue, near Harbord street, \$12,600.

A. Ansley & Co., warehouse, Wellington street, near Mincing lane, \$30,000.

Ausman and Marshall, dwelling, Albany avenue, near Wells street, \$2,800.

W. B. Charlton, dwellings, Withrow avenue, near Broadview avenue, \$4,000.

J. A. Ellis, dwelling, Chestnut Park avenue, near Roxborough avenue, \$7,500.

Saunders, Lorie & Co., factory, corner of Adelaide and Simcoe streets, \$22,000.

Roman Stone Co., Limited, factory, Nos. 90 to 100 Marlborough avenue, \$1,000.

W. G. Robinson, store and dwelling, Broadview avenue, near First avenue, \$3,200.

John Fiske, alterations to office building, corner of Scott and Wellington streets, \$9,000.

International Varnish Co., factory and office, corner of Gerrard street and Carlaw avenue, \$32,000.

Warwick Bros. & Rutter, warehouse and factory on King street west, near Spadina avenue, \$45,000.

LONDON.

H. Pocoke, dwelling, on Marmora street.

HAMILTON.

A. A. Matthews, dwelling, Ferguson avenue, near Wood street, \$700.

T. J. Roussell, dwelling, Madison avenue, near Wilson street, \$1,200.

BUSINESS CHANGES.

ONTARIO.

The business of James Howard, Lyleton, is offered for sale.

The business of the Premier Carriage Co., Toronto, is offered for sale.

The brick manufacturing business of C. E. Chantler, Penetanguishene, is for sale.

Cook & McCay, painters, Toronto, have dissolved partnership, McCay continuing.

The East Templeton Lumber Co., Limited, of Brockville, have been incorporated.

R. Fletcher & Son, hardware merchants, Toronto, have been succeeded by J. H. Copeland.

E. M. Fowler, president of the St.

Anthony Lumber Co., of Ottawa and Whitney, is dead.

The Welsh Tanning Co., of Hastings, have added new directors and are increasing the plant.

D. F. McPherson, of McPherson-Hovey Co., manufacturers of threshing machines, Clinton, is dead.

Clifford & Leask, blacksmiths, Ottawa, have dissolved partnership, Daniel Clifford carrying on the business.

The W. A. Dunn Lumber Co. have been given permission to change their name to that of the Booth Lumber Co., Limited.

QUEBEC.

Plante & Archambault, blacksmiths, of Montreal, (St. Henry), have dissolved.

S. E. Adam, general store and lumber merchant, of Disraeli, is offering 60c on the dollar.

Joseph Desforges & Co., wholesale and retail hardware dealers of Montreal, have sold their assets.

T. Franette, manufacturer of stoves and safes, Montreal, has sold his business to Pierre Paradis.

Samuel R. Smith and Wm. J. Gardiner, have registered under the style of Smith & Gardiner, plumbers, Montreal.

MANITOBA AND N.W.T.

Lewis Loblon, blacksmith, Yorkton, has sold out.

The Macoun Hardware and Lumber Co., of Macoun, have dissolved.

The Alameda Coal Co., Limited, of Alameda, have been incorporated.

Thos. Wilkinson, hardware and implement merchant, of Pense, has sold out.

The Calgary Lumber and Mfg. Co., Limited, of Calgary, have been incorporated.

Anthony Uhrich, dealer in agricultural implements, has been succeeded by Uhrich Bros.

The hardware firm of Booth & Edwards, Sedley, has been succeeded by G. O. Edwards.

James McDole, lumber merchant of Cypress River, has sold his business to Thomas Millard.

Minhinnick Bros., of Esterhazy, hardware and implement merchants, have admitted A. Renault to the firm and will be known in future at Minhinnick, Renault & Co.

BRITISH COLUMBIA.

The mill of the Cascade Lumber Co., Limited, Vancouver, has been seized.

R. Mackay, hardware merchant, Vancouver, has been succeeded by J. A. Russell.

Geo. Patchett & Co., hardware merchants, Armstrong, have assigned to F. T. Jackson.

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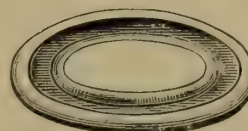
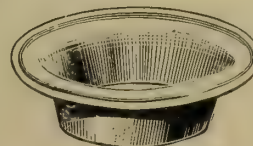
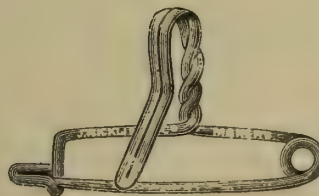
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BEFORE one can attempt to study electricity either in its application or known principles it is first necessary to know something of electro magnetism and the laws that govern that branch of physical science. What electricity is no one at present knows and although it may never be known by anyone, its effects have been reduced to formulae and equations with a precision unknown in other branches.

HISTORICAL.

The magnet was known in very ancient times but it was not until the tenth century that the discovery was made that it possessed the remarkable quality of pointing north and south. It then became useful in navigation and was known as the lode-stone or leading stone. This lode-stone is a form of iron ore known to mineralogists as magnetite and if a piece of hard iron or steel be rubbed with the lode-stone it too assumes the properties of the other and attracts particles of iron in the same manner. Little more was known of the magnet until Dr. Gilbert, to whom a monument is at present being erected, wrote his famous work in 1600 entitled *De Magnete*. He pointed out that every magnet had two poles and that the portion lying between these poles was less magnetic.

EXPERIMENTAL.

To study the question the best means is to employ a magnetic needle which is cut out of steel and mounted in brass, glass or agate so as to turn with very little friction. This when magnetized by being rubbed with a magnet is similar to the compass sold by opticians and will set itself in the magnetic meridian. If a magnet be held near the needle presenting the different ends in succession it will be seen that the end of the needle that is attracted by one end of the magnet is repelled by the other. If two magnet needles be used a similar effect is noticed. The ends pointing north repel each other, likewise with the south pointing ends, but the north and south ends are attracted to each other in either case. This gives rise to the law that "Like magnetic poles repel each other and unlike poles attract each other" which is called the first law of magnetism. It may be noted in passing

that it is impossible to have one pole without another. If a piece of wire be magnetized it has two poles of different kinds and if the wire be broken each piece will still be a magnet with two poles. The unit magnetic pole is one which exerts a force of one dyne on another unit pole at a distance of one centimeter and such a pole forms the foundation on which is based the whole system of electro units. If a current of electricity be sent through a wire wound around a core of iron or steel the core becomes an electro magnet and upon this fact is based the principle of dynamo electric machines. More information on this subject will appear in subsequent issues.

Sockets and Rosettes.

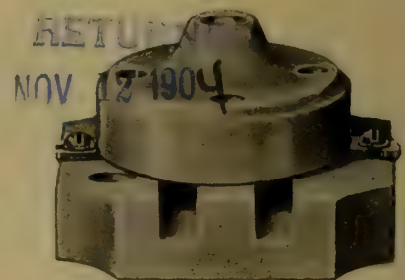
MANY hardware firms throughout the Dominion are now carrying quite an extensive stock in electrical goods. They are realizing more

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M. C. Socket.

and more the growing importance of these lines and what an easy matter it is to establish themselves in a profitable



M. C. Moulding Rosette.

electrical supply business. Thus they will be interested in anything new that is being placed on the market in this line. There are illustrated on this page a few lines manufactured by Munderloh

We make Electric Fixtures, Sockets and Cut-Outs

Munderloh & Co

Electrical Supplies of all kinds.

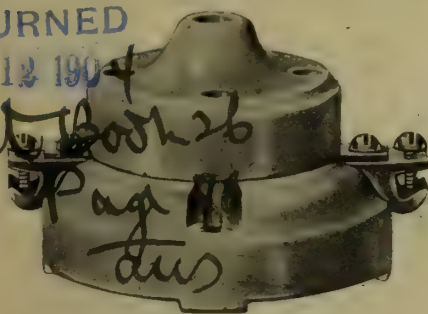
MONTREAL.

& Co., of Montreal, that can hardly fail to attract attention. They include a moulding rosette, a cleat rosette, a concealed rosette, and a high class socket,

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aus



M. C. Cleat Rosette.

all of which are built in strict accordance with the rules of the Canadian Fire Underwriters' Association. They are handsome in appearance and well finished and with them goes the firm's

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M. C. Concealed Rosette.

guarantee that customers will not find any loose screws or detached parts in the package, as great care is taken that every piece passes a rigid inspection before being placed on the market.

What Electricity Does.

The following is given as an authentic excerpt taken from a Civil Service thesis by a candidate applying for Government appointment in the United States: "Electricity is the most and greatest invention's that ever existed. They invent all kinds of musical instruments such as graphophones and phonographs and sewing machines and electric lights and trolley cars and it acts quicker than steam. Silk mills is also run by motors & Dynamos."

BRASS CHAINS



FOR ALL USES

Let us know your needs and we will quote you. We supply brass chains in all sizes, Picture, Chandelier, Brazed Oval Link, Ladder, &c., &c., and can make it to your advantage to buy from us.

CAST AND STAMPED BRASSWARE OF EVERY DESCRIPTION.

JONES & BARCLAY, BIRMINGHAM, ENGLAND.

The Sarnia Hub, Spoke and Bent Goods Mfg. Co.

Sarnia, Ontario

We are prepared to fill any orders for

Heavy Wagon, Sleigh, Buggy, and Cutter Stock.

We make a specialty of heavy stock and can fill orders promptly. Made from the best of oak and hickory as we carry a large stock of lumber and can make any sizes that may be required. We make it a point to fill orders promptly.

If you are in need of anything in our line we will be pleased to hear from you and we will give it our prompt attention.

J. S. LOUGHEAD & SON, Sarnia, Ontario

I've Worked 16 Years

at the heating and plumbing trade, and I know my business. I can tell you the good points—and bad points—of every hot water boiler made in this country. I have designed

The Economical Hot Water Boiler

and have made it a better boiler than any other I know of. Heats better and quicker, burns better, and consumes less coal than any other.

Booklet tells more about it. Send for it.

P. Gies, Founder, Berlin, Ont.



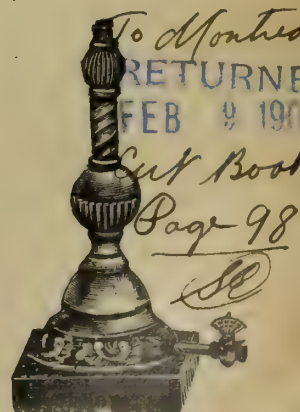
Electric Light and Gas Portables.

These Prices Net to
the Trade Only.

Write for quantity prices.



No. 180—Bracket Portable.
Electric only. Price \$1.00.



No. 193—Gas Portable.
Price \$1.10.

The Sayer Electric Co'y, MONTREAL

Window and Interior Displays

Timely Hints
and Suggestions

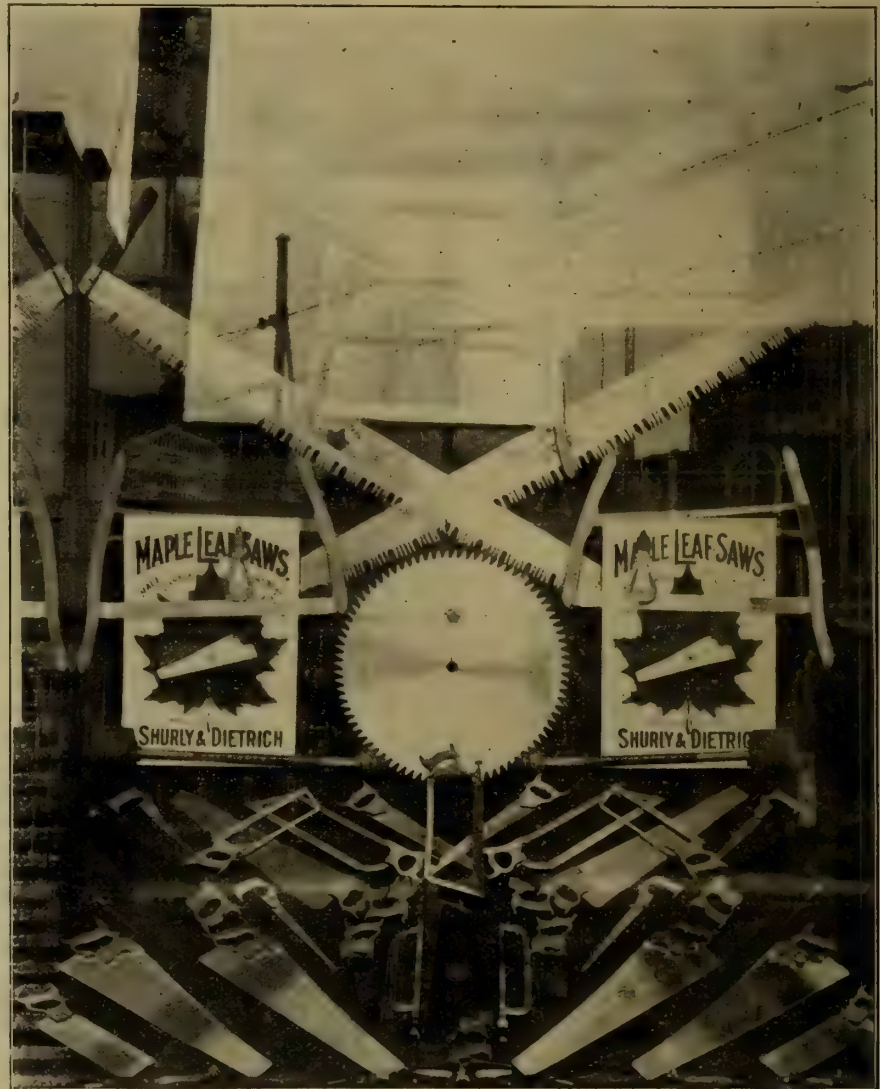
Mechanical and Electrical Effects.

BY the use of a small motor there are innumerable displays of a spectacular nature that will work wonders in advertising a business, and will prove of unending interest to the passersby. The crowd never tires of a mechanical display, and there is such a wide range of ideas available that novelty can always be a part of the window. The effect need not be of an elaborate nature, nor should the motor be in constant use; its efficiency as a feature of the display will be much increased if it is varied with ordinary arrangements. The average window dresser considers such a mechanism as entirely beyond his means, but the cost is not as prohibitive as might be supposed. A quarter horse power is ample for an ordinary moving display, and even less may be found sufficient; a half horse power will run any effect desired. The cost depends upon the current used, alternating or direct, the latter being about three-quarters the price of the former. The alternating current is now, however, most used. For this a good $\frac{1}{4}$ horse power motor should cost about \$80, 1-3 horse power \$90, and $\frac{1}{2}$ horse power \$105; but motors of less trustworthy construction can be obtained for considerably less money. The same power with direct current would cost about \$60, \$70 and \$80, respectively. In addition to the motor there are necessary only the belting and a few pulleys.

If the expense of a motor is too great, or there is no electrical connection, the window dresser can set up a water motor that will cost him only a few cents and will give good satisfaction where not too great power is desired. In some place out of sight and near at hand (the cellar is preferable as it is nearest the window) place two barrels, one filled with water on a table or elevation above the other. The water runs through a small hole onto a water wheel fixed on an axle in the lower barrel. By connecting by means of a belt a small wheel on the end of the axle with the object to be moved in the window, the apparatus is complete. A simple revolving platform can be made of a tireless bicycle wheel fastened in the window floor by its axle. A belt wound around the rim and connected with the water wheel will easily

turn quite a heavy load. This motor can be made more powerful by placing one of the barrels upstairs and connecting it with the water wheel downstairs by means of a tube or pipe, the extra fall of the water accounting for this. A water wheel under a tap will generate good power and remain in ac-

cost small, after the initial expense. In wiring for such a window care must be taken that the insulation is perfect, otherwise fire is apt to break out, and the insurance would be hard to collect. All lights before the eyes should be colored or frosted to prevent a blinding glare.



A seasonable display arranged by A. M. Cameron for McLennan & Co., Lindsay.

tion for any time. The barrel will supply the power for some hours without refilling.

Many windows can be greatly improved by fixing colored or frosted incandescent bulbs through the display. The effect is exceedingly good, and the

Even the moving figures which are set going by winding are serviceable for a change, and are so inexpensive that a half dozen can be purchased for very little money. Such schemes have not the favor they once had, but their adoption is not at all objectionable at times.

INDUSTRIAL CONDITIONS IN
BIRMINGHAM.

By H. B.

BIRMINGHAM is the home of many British industries, and during times of general trade depression it seldom happens that work is short in all of them. At the present time, however, trade is very quiet all round. Manufacturers of light articles, such as jewelry, light brass goods and the thousand and one knick-knacks which the

central great city of England supplies, are feeling the benefit of the customary demands for the Autumn season and the Christmas trade, but on the whole business may be regarded as flat, stale and unprofitable. The depression consequent upon lavish national expenditure in a great war with ever increasing foreign competition, seems for the moment to have practically paralyzed the home industries and Birmingham is suffering throughout her commercial system, as a natural consequence.

* * *

Government requirements have kept the military gun trade fairly busy, and happily a recent order to restrict the output of the new army rifle, so far as the Birmingham manufacture of it is concerned, has been rescinded, or at least modified, in view of the coming Winter and its privations. Otherwise the gun trade would have been in a sorry state. Sporting guns have been in poor demand considering this is the season for them, but orders for cartridges have been sufficiently large to prove that to economy rather than to any decline in the sporting instinct, must be credited the unsatisfactory condition of this important Birmingham industry. On all sides the cry is the same—“Money is scarce.” Luxuries must therefore be curtailed. So the man that is ordering a new motor car dispenses with a new gun.

* * *

Large orders for finely appointed rolling stock for South American railroads and steel wagons for the same lines have enabled railway carriage builders to face the situation with greater equanimity than otherwise they might have done, but bridge builders and producers of structural materials, girders, joists, and ties and angles and channels throughout the Midland district, though partially occupied, cannot be said to be busy. There is a fair demand for heavy iron foundries work in some quarters, but signs of a general revival throughout local iron industries are not yet apparent.

* * *

Heavy sales of War Office stores have had a depressing effect upon the saddlery trade in the neighboring town of Walsall, and though some cycle companies have been able to submit good balance sheets rumors of cheapening the make of cycles for the Spring season point to special efforts being made to suit buyers who have been affected by bad trade.

CONDENSED OR “WANT”
ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
“ “ “ 6 months.....	17 00
“ “ “ 3 months.....	10 00
50 “ “ “ 1 year.....	17 00
“ “ “ 6 months.....	10 00
25 “ “ “ 1 year.....	10 00

BUSINESS CHANCES.

BLACKSMITH SHOP AND TOOLS—Well equipped; doing first-class business. Box 89, Durham. f

CARRIAGE SHOP FOR SALE—Good repair business done; only shop in the town of Aylmer; must be sold at once. Apply J. E. McDonald, assignee, Aylmer, West. f

FOR SALE—Good paying tinshop; good dairy trade; large eavetrough business; everything complete for the work; stock, tools, horse, rigs, cheap. R. B. Scriven, Otterville, Ont. (48)

GOOD FOUNDRY AND MACHINE SHOP—In first-class running order; must be sold to close estate of late James Coulter; three miles from Toronto Junction. Apply to Joseph Nason, 16 King St. W., Toronto, or on the premises. f

HARNESS BUSINESS FOR SALE—In a good farming district; established twenty years. For particulars apply to Wright & Beatty, Florence, Ont. f

HARDWARE BUSINESS FOR SALE—In a thriving town in Western Ontario. Satisfactory reasons for selling. Stock new and well bought amounting to say \$3,500, business well established with but one competitor. Apply, Box 197, HARDWARE AND METAL, Toronto. (50)

MECHANICS WANTED.

LATHE HAND—Must have good experience on turning shafting; say what can do. Dodge Mfg. Co. Works, Toronto Junction. f

MACHINIST—Table standard pipe tapping sizes; 5 cents. E. E. Meyer, Allegheny, Pa. f

MOUNTERS WANTED—at once—one stove and one-furnace mounter; steady employment. Clare Bros. & Co., Limited, Preston, Ont. f

STOVE-PLATE moulders wanted—steady job; comfortable shop; best wages. The William Buck Stove Company, Limited, Brantford. f

SUPERINTENDENT for new hardware manufacturing company; must be up to date on labor-saving devices, estimating costs and handling men; also have practical machinery and foundry experience; state references and salary expected. Address Canada, Box 332, London. f

TO IRON AND STEEL MANUFACTURERS.

FIRM of iron and general merchants well placed for advantageous buying, is prepared to act for colonial houses as buying and shipping agents on commission, of iron and steel and manufactured goods. Address in first instance Box 2325, Sell's Advertising Offices, Fleet street, London, Eng. (48)

IDEAL STOVE
POLISH

The best Stove Polish on the Canadian market to-day.
Get it from your own jobber.

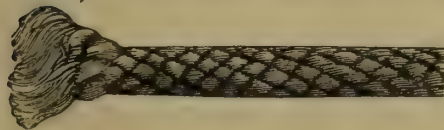
St. Arnaud Freres
425 St. Paul St., MONTREAL.

\$IGNS\$

Mr. Merchant, are you awake to the appearance of your Store? Have you got your Name up properly? Do you realize that the best Advertising Medium in the world is advertising where you have the goods to sell? We can supply you with Signs that will advertise you, sell goods, and brighten up your Store. We make everything from the smallest Show Card to the largest Sign.

The Martel-Stewart Co.
681-685 Craig Street, - Montreal.

Buy the Best.



HERCULES

Sash Cord.

Star Brand Cotton Rope
Star Brand Cotton Clothes Lines
Star Brand Cotton Twine

For Sale by all Wholesale Dealers.

To the Retail Hardware Trade of Canada:



This advertisement will show you how we are trying to interest the consumer.

The public is interested, for we get enquiries every day from all over Canada

We are willing to help you in other ways to sell our goods.

*We have a proposition
that will interest you.
Write us.*



What a source of delight it is for a housekeeper to know that even if her potatoes boil dry and scorch at the bottom, there is no burnt taste to them!

THIS IS TRUE ONLY WHEN

AN ALUMINUM KETTLE

Is Used.

It imparts no burnt taste; never cracks nor chips; never burns nor rusts, and no danger from poison. Easily cleaned and polishes like silver.

The price of all Aluminum Goods is now reduced.

Made by the CANADIAN ALUMINUM WORKS, Limited

OFFICE: 13 ST. JOHN ST., MONTREAL.

FACTORY AND FOUNDRY: CHAMBLY CANTON, QUEBEC.

Catalogues to the trade on application.

The Canadian Aluminum Works, Limited, Montreal.



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END

"Famous" Oil Heater

Burns with a clear white flame.

Throws out an intense heat at a cost of about one cent per hour. Makes no odor whatever.

Can be carried from room to room, and is so simple that a child can operate it.

Cold air is drawn from off the floor and discharged, thoroughly heated, from top of heater.

Has seamless copper tank which never leaks. We can ship promptly. Advertising matter free.

The McClary Manufacturing Co.

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

"EVERYTHING FOR THE TINSHOP."

HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,

Montreal.

The **MacLean Publishing Co.**
Limited

Publishers of Trade Newspapers which circulate in the Provinces of British Columbia, North-West Territories, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, P.E. Island and Newfoundland.

OFFICES.

MONTREAL - - - 232 McGill Street.
Telephone Main 1255.
TORONTO - - - 10 Front Street East.
Telephone Main 2701.
WINNIPEG, MAN. - Room 515, McIntyre Block.
Telephone 1846.
L. P. Luxton.
LONDON, ENG. - - 88 Fleet Street, E.C.
I. Meredith McKim.
Telephone, Central 12960.
MANCHESTER, ENG. - 92 Market Street.
H. S. Ashburner.
ST. JOHN, N.B. - - No. 3 Market Wharf.
J. Hunter White.
NEW YORK - Room 1241 New York Life Bldg.
W. T. Robson.
VANCOUVER, B.C. - Geo. S. B. Perry.
ADELAIDE, AUSTRALIA, - Steamships Building.
W. H. Sharland, Jr.

Subscription, Canada and United States, \$2.00.
Great Britain and elsewhere - 12s

Published every Saturday.

Cable Address { Adscript, London.
Adscript, Canada.

New Advertisements:

Central Business College, Toronto.
T. H. Wynn, Hamilton.
Canadian Aluminum Works, Montreal.

ALUMINUM KITCHENWARE.

WHEN, years ago, the prediction was made that some day aluminum would become so common that it should be used by every cook, by every housekeeper, in the land, the scoffer was present to make jest of the prophecy.

But time has wrought its changes. To-day the Canadian housekeeper is being offered through the daily press all the advantages of aluminum in pots and pans, in kettles, ladles, lamps, dishes of all kinds. The public have evidently appreciated the offer, too, for already a big business in aluminum goods for the household is being done.

This business should be done through the hardware trade. In fact, the manufacturers of aluminum goods have manifested a strong desire to do all their business through the retailers. The line is one that is abundantly worthy of at-

tention, in the small village as well as in the largest cities.

Many retailers have stocked the line, others are now doing so; in a few years, probably, it will have become a standard line in the trade.

THAWING WATER PIPES.

It generally happens that when ordinary precautions have been taken little thought or attention is given to the question of the freezing of water pipes until such a state of affairs actually exists. We are now fast approaching the time of the year when incidents like this happen without warning. Suddenly after an unusually cold snap, or due to a window or door being left open over night, the inmates of a home are made aware of the fact that the water service is frozen. The trouble may be outside the house or building altogether in the branch from the main, or in the main itself. At all events the situation is a serious one when the total water supply is obtained from the town or city water-works service. The plumber is looked to as the one to locate the trouble and effect a remedy. Being associated with the installation of water pipes and accessories, it is natural that he should be depended on to relieve the situation, and by its accomplishment must he maintain or lose his prestige.

In Canada, with our zero weather, the question is of general interest, as natural conditions are all too favorable to frozen pipes and disarranged water systems with an accompaniment of bad tempers and ruffled feelings. It is in the face of this problem that the plumber or steamfitter very often meets his Waterloo, has to haul down his colors and retire from the field with drooping feathers. He can install an intricate system and have it working to perfection, he can design apparatus to answer every requirement, yet when it comes to thawing out water pipes, although he attacks the matter with his usual energy and enterprise, he is often forced to acknowledge defeat.

The reason of all this is not always that the methods employed were cumbersome, but not knowing the exact place where the freezing occurred, the plumber was in the dark as to where to start. The most effective method heretofore used has been the utilization of

live steam, conveyed to the pipe by means of a rubber tube. This was more or less satisfactory. In thawing hydrants the latter method has been used with fair success, although the operation required some time. Now comes the application of electricity as a solution to the same problem, and, as in the case of many another utilization of the same force, it stands far and above all other methods. The simplicity of the method adopted should appeal to everyone, and its effectiveness was well demonstrated during the past severe winter, in many United States cities where precautions against excessive frost are not usually taken as seriously as is a necessity in this country.

Direct and alternating currents have been used with equal success. In using alternating current the high tension mains are tapped and a large current capacity transformer used, transforming to low voltage. Connection is made to the hydrant outside and the stop-cock in the house, and anywhere from 100 to 500 amperes sent through, the current being controlled by means of a water rheostat. The objection to the use of alternating current is that it is apt to ring all the telephones grounded in the vicinity. Another method for a large city, an equipment which earned for its owner about \$7,000 last year, is to employ a portable engine upon which is mounted an eight or ten kilowatt generator, of twelve or fifteen volts, giving a current in the neighborhood of 600 amperes. By running the generator by means of the engine and making the necessary connection, pipes were thawed out in less than one minute from the time the current was turned on.

As this seems to offer the best means for the plumber to overcome the frozen pipe nuisance, it should be well worth their while to investigate it. They might see that electric light companies are provided with the necessary apparatus, or in larger cities it could be made a profitable business by anyone providing himself with a portable outfit and making a specialty of it.

LANTERN ASSOCIATION DIS- SOLVED.

We are advised that the Canadian Lantern Association, which has been in existence for the past five years, has been dissolved, and, as a consequence,

low prices are looked for during 1905. We understand that certain manufacturers are already making a desperate effort to tie up the trade, but, considering existing circumstances, we fail to see that anything is to be gained by the trade placing their orders six or eight months in advance.

OUR TRADE WITH BELGIUM.

THAT a lively interest in Canada and things Canadian exists among the people of Belgium has been evidenced in a striking manner by one of the Belgian newspapers, which has recently sent a permanent correspondent to this country. The interest is in the main commercial, though the Belgians evince a desire to become better acquainted with our constitution, our social system and our people in general.

From a trade standpoint, our relations with Belgium are worth cultivating. Among the nations who sell to us she stands fifth, with a total sale of \$2,649,490 worth of products during the last fiscal year. In the list of our customers, Belgium also ranks fifth, being exceeded in her purchases only by Great Britain, the United States, Australia and Newfoundland. During the last fiscal year she bought goods to the value of \$2,150,550, of which \$1,658,163 were home produce.

In still further analyzing our trade with Belgium we find that the following goods comprise the bulk of Canadian purchases: Cement, \$261,618; drugs, etc., \$94,235; glass, \$584,584; metals, and manufactures of, \$764,282; precious stones, \$82,677; sugar and molasses, \$430,763. The importation of cement has continued of steady proportions for several years, averaging about \$200,000 per annum. The importation of drugs, dyes, etc., has grown very considerably latterly. In 1899 we only imported a little over \$6,000. The importation of glass has shown substantial growth since 1899, when it stood at \$349,910. The importation of metals and their manufactures has grown by leaps and bounds, advancing from \$78,000 in 1899, to \$100,000 in 1900, to \$173,000 in 1901, to \$288,000 in 1902, and to \$764,282 in 1903. This expansion has been mainly in steel rails. The importation of precious stones has likewise grown remarkably, being only \$202 in 1899. On the other hand sugar and molasses have

fallen off very considerably from \$2,854,524 in 1901 to \$430,763 in 1903.

Our exports to Belgium are composed principally of: Breadstuffs, \$1,309,296; fish products, \$42,062; metals and their manufactures, \$150,649; seeds, \$129,339; wood and its manufactures, \$257,312. In all of these departments there has been a substantial growth of late years. Breadstuffs totalled \$569,800 in 1899; fish, \$13,140; metals, \$54,985; seeds, \$93,508, and wood only \$77,924. Contrast these with the importations of the past fiscal year and the advance is most apparent.

Judging then from the extent of our commercial transactions with Belgium, it would seem quite the thing that the people of that country, and especially its merchants, should desire to know more of this country. On the other hand, we should not allow ourselves to be outdone in the securing of useful information. It is time to investigate the resources, industries and commercial methods of Belgium.

INDIGNANT BRITISH MERCHANTS

Republished by Special Request.

MUCH harm is being done in business circles in the Old Country, particularly amongst Birmingham exporters, by the representative of a Canadian publication, who claims to have been delegated by the Canadian Government to interview manufacturers and exporters with a view to securing their advertisements in the trade paper with which he is connected, and which, he claims, is a Government subsidized trade organ.

A number of advertisers have had their eyes opened to the misrepresentation recently, and a short time ago a meeting was held in Birmingham, when 75 firms decided unanimously that their advertising contracts would be immediately cancelled. These 75 men represent only a portion of the total number who have been induced to place orders in this paper, and no doubt the remaining advertisers will soon follow in their wake. It seems almost incredible, but a large number of these firms jumped at the offer of a list of "the best Canadian buyers," personally prepared by the gentleman in question.

It is to be regretted that firms who placed their orders in the paper referred to did not make close and careful in-

quiry regarding the standing of the publication before entering into contract with it. We understand, however, that many allowed themselves to be rushed into signing the contract on the representation of the canvasser that his affairs would not permit him to call upon them again.

RECIPROCITY A DEAD ISSUE.

IN spite of the attention reciprocity with Canada is receiving in the United States not a word in favor of reciprocity with the United States has been heard in Canada during the Federal campaign just concluded. Thirteen years ago the reverse was the case. It was then the pivotal question upon which the general election turned.

The McKinley tariff, specially designed to injure and humiliate Canada had gone into force the year before, and there were a great many people who feared that its effect would be disastrous to the trade and commerce of the Dominion. How unwarranted their fears were time has shown. And to-day there is not a politician in Canada to do it reverence, although in the Presidential campaign in the United States there are many public men who are ardent champions of reciprocal trade with Canada.

Reciprocity with the United States is defunct, and there is not a public man in Canada aspiring to a seat in the House of Commons who has the courage to make it a plank in his platform, or to advocate it in any shape or form. Reciprocity is practically dead and buried. In no province of the Dominion is there any sentiment in favor of it.

It would be unwise to attempt to foretell what the future may bring forth. We are told in well informed circles in the United States that President Roosevelt will make a proposal to Canada to discuss the subject of reciprocity. It is gratifying to Canada to learn that public opinion (or perhaps it would be more correct to say commercial opinion) has become powerful enough to induce the executive head of the United States to act, but it will be a long time indeed before public opinion in Canada will be strong enough to induce even a solitary politician to champion such a cause.

Reciprocity of the right kind might be a good thing for both countries, but there is no one in Canada who believes the right kind of reciprocity with the United States is possible.

JUDGMENT IN CASE OF TRADING STAMPS.

MR. JUSTICE DOHERTY has rendered judgment in Montreal in the important case of Wilder vs. the city, better known as the trading stamp case.

This will be remembered as an injunction taken out to prevent the enforcement of the city by-law prohibiting the use of trading stamps. Among other grounds raised by the petitioner were the following: That the city council had adopted the by-law without the required notice; that the Act of the Legislature authorizing the city to pass such a by-law was unconstitutional, and that the by-law itself was ultra vires of the Legislature and hence of the powers of the council.

The city, on the other hand, claimed that the special statute under which the by-law was passed required no notice, as the power was conferred by special statute, and also defended the constitutionality of the Act of the Legislature.

By the judgment rendered the court maintained the city's pretensions in every respect and quashed the injunction. One of the chief points raised by the petitioner was that the council's proceedings to pass the by-law were irregular and illegal, but the court held the contrary.

Mr. Wilder, owner of the Trading Stamp Co., has made an appeal and declares that he will continue his trading stamp business until the Privy Council shall have decided against him.

mand for their goods has increased with the age of the firm, they found themselves greatly handicapped for working space, and this necessitated making the present move, which has put them in a spacious and modern equipped warehouse, factory and office building.

Their new building, as is seen by the accompanying illustration, is sixty feet by two hundred feet, and is three storeys high. They have installed, along with their regular machinery, machinery of a larger size and better pattern, so that they are now in a first-class position to manufacture dynamos and motors of all sizes and currents. They have in their employ nearly one hundred mechanics, the majority of whom are skilled machinists and electricians. They make a specialty of laying wires by contract, and for this purpose they employ a large staff.

The old stand will be used as a supply house, and on account of its central position a good business should be done there.

WHOLESALE HARDWARE ASSOCIATION.

A regular business meeting of the Wholesale Hardware Association of Canada was held in the offices of Jenkins and Hardy, Toronto street, Toronto, on Thursday, Nov. 10. The newly elected officers are: President, C. A. Whitwan, of Hobbs Hardware Co., London; vice-president, Wm. Shaw, of Chinic Hardware Co., Quebec City. The delegates present were: Wm. Vallance,

ware Co., Montreal. No business of special importance was transacted, and present prices continue unchanged.

Business Men in Parliament

Mr. W. S. Loggie, Member-elect for Northumberland, N.B.

IN the new Dominion Parliament, Northumberland, N. B., will be well represented by Mr. W. S. Loggie, one of the prominent merchants and foremost citizens of the Town of Chatham. Mr. Loggie is the proprietor of a

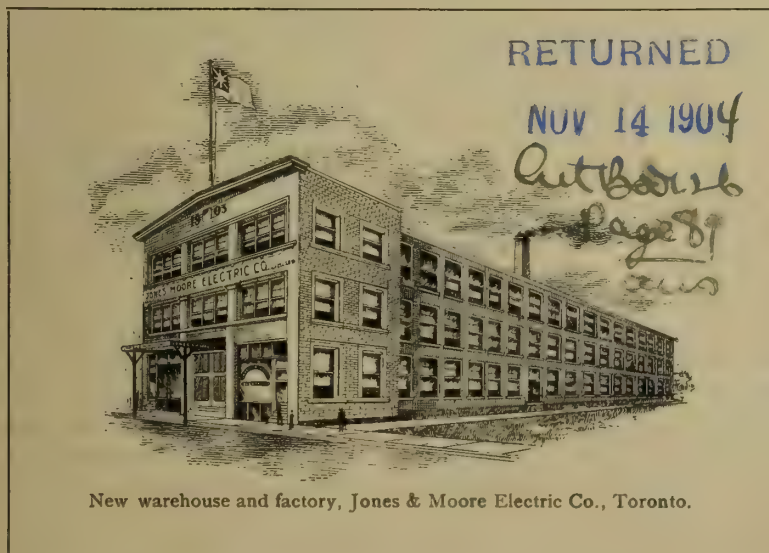


Mr. W. S. Loggie.

large general store in that town; he is also interested in a fruit canning industry located there. He has shown himself a level-headed business man and has conducted both mercantile ventures with considerable success.

Mr. Loggie has also taken a prominent part in the deliberations and practical work of the Maritime Board of Trade, being an ex-president of that organization. His political career began some years ago when he entered the municipal arena and served his town well as occupant of the mayoral chair. Then he contested his county in the Liberal interests in the last provincial elections, defeating his opponent by a safe majority. He resigned his seat in the New Brunswick Legislature a few weeks ago in order to enter federal politics, and was equally successful in the election of November 3.

Personally Mr. Loggie is a quiet, unassuming man, averse to all self-advertising. He is, however, very popular among a wide circle of friends, and is held in great esteem among the business men of the provinces. He has been always a good church and Sunday school worker in his home town, and makes all round a first-rate citizen.



New warehouse and factory, Jones & Moore Electric Co., Toronto.

MOVED INTO NEW FACTORY.

THE Jones & Moore Electric Co., of Toronto, manufacturers of dynamos and motors, have moved into their new and spacious building at 296 Adelaide street west. This firm have been in business for ten years at 20 Adelaide street west, but as the de-

of Wood & Vallance, Hamilton; T. B. Lee, of Rice Lewis & Sons, Toronto; T. Dexter, of H. S. Howland, Sons & Co., Toronto; S. R. Kennedy, of the Kennedy Hardware Co., Toronto; T. H. Newman, of Caverhill, Learmont & Co., Montreal; F. O. Lewis, of Lewis Bros. & Co., Montreal; Robert Stark, of Stark Hard-

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Hardware.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Nov. 11, 1904.

A FEELING of inactivity has pervaded the hardware market for the past ten days, although it was expected that an unusually brisk trade would be done. This is accounted for in several ways. The holiday and election day coming last week are not without their effect. Many travelers came to the city last week and consequently fewer orders were sent in. Besides, there seems to be an unsettled feeling that acts detrimentally to trade, the usual conditions not having been assumed since the elections. While this applies to shelf hardware the condition prevailing in heavy goods bears considerable contrast. Building hardware, horseshoes, bolts and nuts, bar iron and glass are exhibiting a buoyant tone. In cement, firebrick, and building paper the market is more active than for many weeks. These lines saw a dull Summer, which is being partly compensated for at the present. The different departments are well stocked and collections are reported good. Prices remain unchanged.

Axes—While most of the Fall orders for axes were placed early in the season some repeat orders have already commenced. We quote: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—Considerable activity exists in these at present. Quotations are: Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3 \$1.50 a dozen.

Carpet Sweepers—Sales in these have fallen off somewhat, recently. Quotations are the same as before, \$21 to \$31 a dozen.

Sewing Machines—There has been a fair trade passing in these within the past week. Our quotations are: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Food Choppers—Only a few orders for these have been received. We quote as follows: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Corn Cutters and Huskers—Contrary to expectations the demand for corn cutters and huskers continues good. We quote: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Agricultural Wrenches—Little trade is being done. We quote as follows: 6 inch, \$2.85 a dozen; 8 inch, \$3.15; 10 inch, \$3.75; 12 inch, \$4.40; 15 inch, \$7.50 a dozen.

Skates—The season opened up well and has continued with considerable activity. We quote: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Lanterns—These are in unusually good demand this week, more orders being received than for some time. There is no scarcity of supplies. We quote as before: Cold blast \$7; No. 0 Safety, \$4 a dozen.

Sleigh Bells—Up to the present time trade in these has been confined mostly to the town and country districts. Within the week the city trade in these has opened up giving every prospect of a large amount of business. We give the following quotations: Brass team bells, rough, \$1.80 to \$4.50 a doz.; polished, \$2.10 to \$5 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—The conditions mentioned in connection with sleigh bells are equally applicable to shovels this week, except that in shovels the demand seems to be a little more brisk. Our quotations are as follows: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount Victor, wood, 35 per cent.

discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Heavy Screw Hooks and Hinges—A scarcity in some sizes of these has been reported and the demand is somewhat better, although no considerable amount of stock is moving. We quote: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—The trade in annealed wire is considered very satisfactory and has kept up somewhat longer than usual this season. We quote: \$2.25 per hundred lbs.

Barb Wire—For some weeks past the barb wire market has been very quiet and this week finds no change in former conditions. Our quotations are: \$2.75 per 100 lbs, f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Car lots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—A very small amount of galvanized wire is being sold, which is likely to be the condition prevailing for some time. We quote as follows: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 8 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—Trade is very quiet. We quote as follows: \$2.65 per 100 lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—The stock of these is in good shape and the volume of business reported is very satisfactory. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets

and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—There is somewhat less of a shortage in screws this week than has prevailed for some time. There is a good demand. Discounts are as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—A large stock of bolts and nuts is moving. Manufacturers have been unusually busy recently to keep up with the demand, and in this they have been fairly successful. We quote: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; black bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—It is reported that a settlement of the wire nails situation is to be effected this week at a meeting of the wire nail manufacturers, but whether or not this is to be the case it is not definitely known at present. There is still a scarcity in some sizes and a lack of ability to fill any considerable sized orders. As mentioned before, prices are not being quoted, as they are the result of individual bargaining with the jobber.

Cut Nails—There is merely a nominal business being done in cut nails at the present time and the market shows little sign of a near renewal of activity. Some sizes are scarce. Quotations are as before, \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Horseshoes—This week has seen a marked activity in heavy hardware. horseshoes in common with other lines sharing in the big demand. Quotations are as follows: "P.B." new pattern, base price \$3.50 per 100 lbs; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1

and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—These are in brisk demand. We quote list price as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22s; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. "P.B." brand, 55 and 60 per cent. off list. Other brands, 55 and 60 per cent. off list.

Shot Guns and Rifles—It was intimated last week that as the season is well on the smallest part of the trade is now to be done. The hunting season is still in full swing, but hunters are already equipped and each week now will see fewer orders coming in. Prices remain the same and are to be had on application.

Ammunition—Sales of ammunition have fallen off considerably within the week and it is not expected that there will be any great revival during the Winter season, although a steady trade is expected. We quote: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand.

Shot—The market is quieter, but even yet considerable stock is moving. Our quotations are as follows: Standard \$6.50 per 100 lbs.; chilled, \$7 per 100 lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—The Spring and Fall season saw a comparative quietness in the building paper trade. Considerable opening up of business has occurred recently and manufacturers of building paper and jobbers are well pleased with the volume of trade passing. It will help to make up for the former inactivity and enable them to get rid of stocks on hand which do not move very briskly during Winter season. We quote: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15

per roll; carpet felt, \$2.25 per 100 lbs. dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—The market continues quiet with no new features. We quote: British pure manila, 11c; pure manila 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c, for 3 and 4-ply bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement and Firebrick—One of the best trades for some time has been done within the past week in cement and firebrick. The activity that was looked forward to in the earlier Fall, which was to have made up for the Summer and Spring quietness seems to have arrived and it is hoped that it may continue for some time. We quote as follows: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—The market is quiet and not at all strong. We quote: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3, one inch, \$2.95.

METALS.

The general metal market, in common with several other lines, has experienced a lull this week, which is considerable change from the briskness attendant upon that market recently. The strong feeling still prevails and although only one change in local prices is noted, there, there have been sharp advances in the primary market in galvanized iron, sheet and ingot zinc, ingot tin, Canada plates, and bar steel. These are consequently all very stiff and near advances in local price expected. Pig iron too, is stiffer and fairly active. The scrap metal market has improved considerably and is marked by brighter feeling than for some months. The price of pig lead has been advanced ten cents and no other change is noted.

Pig Iron—No startling change has taken place in pig iron since the last report. There is considerable activity and although the market continues still stronger local prices have not been ad-

vanced. This, however, is expected to take place shortly. Quotations are:

"Disc," No. 1.....	\$16.50	delivered Montreal.
"Dom," No. 1.....	17.50	" "
Usual difference in price for lower grades.		
Ferrona No. 1.....	\$18.00	delivered Montreal.
" No. 2.....	17.50	" "
" No. 3.....	16.50	" "
" No. 4.....	16.00	" "
Londonderry.....	\$18.50 to \$19.00	delivered Montreal.
Summerlee.....	18.50	" "
Glengarnock.....	20.00	" "
Gartsherrie.....	19.25	" "
Carnbroe.....	18.50	" "
Carron No. 1.....	19.50	delivered Montreal.
(special).....	18.50	" "
Ayresome No. 1.....	18.00	" "
" No. 3.....	17.50	" "
Clarence No. 1.....	17.00	" "
" No. 3.....	16.50	" "
No. 1 Cleveland.....	17.00	" "

Bar Iron—The bar iron market is still active and although it was noted last week that manufacturers had pretty well caught up with the demand, the shortage this week seems to be more apparent. Our quotations are as follows: Merchants' Bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash thirty days.

Tool Steel—No change is noted in tool steel this week. There is a fair demand. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jesop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 71-4c; Conqueror High Speed steel, 60c.

Merchant Steel—The market continues firm with a somewhat lessened demand. Our quotations are as follows: Sleighshoe, \$1.77 1-2; tire, \$1.87 1-2; Spring, \$2.75; toe calk, \$2.37 1-2; machinery (iron finish), \$1.97 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.77 1-2; rivet, \$1.82 1-2. Net cash thirty days.

Cold Rolled Shafting—There is generally a fair demand for cold rolled shafting throughout the entire year and although for some time past the market has been more than ordinarily brisk there is only the usual demand at present. Quotations are as follows: Cold rolled shafting, 3-4 in., to 17-16, \$3.85 per hundred lbs; inch and a half to 3 inch, \$3.50 per hundred lbs.

Canada Plates—Canada plates have advanced from 5s to 7s 6d per ton on the stirring market, but the price has not been changed, although the market is very firm and active. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—The market is steady and the demand is quite brisk. Quotations are as follows: 28 gauge, \$2.15;

26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge \$2.30.

Galvanized Iron—Galvanized iron has shown a quieter tendency this week. Orders have already been placed for Spring delivery at an advance of from 5s to 10s a ton. We quote: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Sheet Zinc—The market is very firm, as an advance of 10s a ton has been noted in the primary market, and the near future will see an advance in local prices. We quote: Case lots, \$6.35 to \$6.60, and small quantities, \$6.60 to \$6.85.

Tin Plates—The demand is hardly as brisk this week, but the market continued very firm. We quote: Cokes, \$3.75; charcoal, \$4.

Ingot Tin—Prices are very firm and the market is extremely active. We quote: 31 1-2 to 32c, the former price for quantities only.

Ingot Copper—This market was advanced last week, and no change is noted this. There is still a strong upward tendency. We quote 14 1-2c to 14 3-4c, the former prices being for quantities only.

Ingot Zinc—There has been a further advance in ingot zinc in the primary market, but the local price remains as before. There is not much stock moving. Quotations are 6c to 6 1-4c, the former price being firmly held, and for quantities only.

Pig Lead—It was noted last week that not for months had the market in pig lead been as high as was then quoted. This week there has been a further advance with a still upward tendency. The market is fairly active. We quote: \$3.45 to \$3.55, no concessions being obtainable on the former price.

Scrap and Old Material—There is a better feeling in the scrap metal market due to the improved feeling and strong tendency in other lines, with every likelihood of further advances in the near

future. Copper has advanced as well as brass and wrought iron. There is a good demand for wrought and all scrap metal. Quotations are as follows: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 2 1-4c; zinc, 2 3-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 5 1-2c.

ONTARIO MARKETS.

Hardware.

Office of HARDWARE AND METAL,
10 Front Street East.
Toronto, Nov. 11, 1904

THE market for general hardware this week is very brisk. All dealers report a good volume of business. There is a special run on all classes of Winter goods, and also on screws, rivets and burrs and bolts and nuts. The demand for ammunition and shot guns keeps up, but the demand for rifles is falling off as a natural result of the advancing season. The large volume of business is due to a great extent to the closing of Summer freight rates on November 14. However, there seems to be a more radical reason than that; trade will probably continue on a firm basis even after the Winter rates start. There is no change in prices to be noted this week. However, at the time of going to press there is a meeting of the Wholesale Hardwaremen's Association in session at the offices of the secretary, Jenkins & Hardy, Toronto street, to discuss general matters, and whether any changes will be made at this meeting waits to be seen. It is not probable that any changes in price will be made.

Lawn Mowers—The trade is interested and orders are already coming in. Prices for 1905 are as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discount 50 per cent. with freight concessions in quantity shipments.

Guns and Ammunition—There is still a good demand for shot guns and ammunition, but there is a slight falling off in the demand for rifles. The deer hunting season has commenced, and

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND.

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Prices to Sales Agents

Drummond McCall & Co.

MONTREAL, QUE.

or to

Canada Iron Furnace Co.

MIDLAND, ONT. Limited

We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON, CANADA PLATES, TINPLATES, WIRE ROPE (W. B. BROWN & CO.), CEMENT, FIRE BRICKS, ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

rifles for that purpose have been nearly all sold.

Washing Machines—Our quotations are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$25; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48, Dandy, \$30.

Chain—We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Clothes Reels—The Davis (W. L. Co.), 40 per cent. off list.

Barb Wire—Orders for delivery in the future are coming in well. We quote \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—Some business is doing with prices steady as below: No. 5, \$3.45; Nos. 6, 7, and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Inquiries continue regarding prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—There is no change in the situation on this market. Cutting of prices continues unchecked, and prices quoted are merely nominal. A seemingly fair quotation is about \$2.25 per gek f.o.b., Toronto, with carlots at \$2.20.

Cut Nails—There is still a fair business doing though prices are comparatively firm. We quote: \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Prices are as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to

Tinned Sheets
Tinplates
Canada Plates
Polished Sheets

ETC., ETC.

FROM STOCK OR FOR IMPORT.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

COLD WEATHER IS COMING.

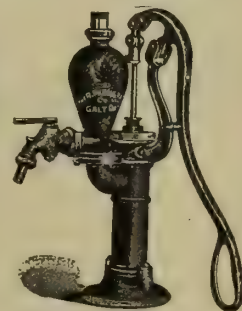
Have you got a line of good Pumps?
If not, you'd better write us about our

STANDARD ANTI-FREEZING PUMP

It's the best there is, and can't freeze if the valve is tripped by raising the handle. It's very simple, and the sale of one should bring you lots of other good business.

Catalog and prices for the asking.

The
R. McDougall Co.
Limited
Galt, Ont.



"ALPHA"
HIGH SPEED STEEL
Crucible Cast Steel
for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.
SHEFFIELD, ENG.

Agents for Ontario:

BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL
& COAL Co., Limited
NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

4. \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are "C" brands, 40, 10 and 7 1-2 per cent.; "P.B." brands, 55 to 57 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—There is a very large volume of business done in these lines. Prices are firm. We make the following quotations: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—There is a good trade being done, with prices firm at last week's quotations. We quote as follows: Iron rivets, 60 and 10 per cent. discount; iron burrs, 55 per cent.; copper rivets with usual proportion of burrs, 45 per cent.

Bolts and Nuts—The volume of business done in this line this week is very large. Prices are steady. We quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square,

Woodenware—We quote: Tubs, No. 0, \$11.25; No. 1, \$9; No. 2, \$8; No. 3, \$7; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

Cordage—Business is being well booked up for rope and the jobbers are preparing for the binder twine trade for next season. Our quotations are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sashcord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2c to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Cement—As far as can be learned the cold weather is affecting the trade to a small extent. Prices remain the same



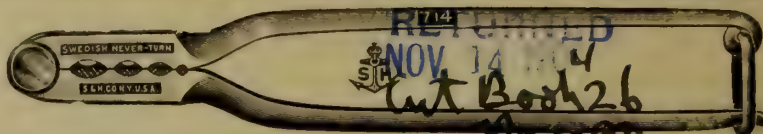
THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.

LINEMEN'S CLAMPS OR CONNECTORS



For No. 3 to 14 iron wire and 2 to 14 copper wire B. & C. gauge, full polished.

Send for Electrical section of the "Green Book of Hardware Specialties."

UTICA DROP FORGE & TOOL CO.

Mfrs. of Nippers and Pliers.

294 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg., Montreal, Canada.

S. H. JENKINSON & CO. LTD.

Mfrs. Cutlery and Hardware Specialties.

ALLEN C. JENKING, Canadian Manager.

GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, Montreal.

Brand Galvanized Sheets

are of uniform quality. There are none better made, but the price is low compared with other leading brands.

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.

Page "Acme" Poultry Netting

This is the only netting that can be erected without puckers, bags or wrinkles in it. The selvage wires being of straight smooth wire, the web can be adjusted smoothly and evenly along the edge and centre wires.

Notice that this netting has a large wire running through the centre (except in the 24-inch) which adds much strength to the web and enables it to hold its shape.

With Acme netting no boards at the top are necessary, and posts can be placed long distances apart.

The netting is very close at the bottom, the meshes being only 1 1/4 inch; at the top they are 3 inch. This makes it as effective as netting of 1 1/4-inch mesh throughout, and the cost is much less.



THE PAGE WIRE FENCE CO., Limited

WALKERVILLE

MONTREAL

ST. JOHN

I

I make Tacks.

I sell them direct to the retail trade—at less money on that account.

By Mail—no travellers.

T. H. WYNN,

II

It's worth a letter.

5 minutes, stationery and a 2-cent stamp.

You hear from me by return mail.

HAMILTON

and are likely to do so till after the first of the year. We quote: Canadian Portland, \$1.70 to \$2.00; English \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex store; American Portland, \$1.70 to \$2.00 f.o.b. Toronto.

Firebrick—Trade conditions are practically unchanged although the dealers are expecting an increase in the demand as the busy season is just beginning. Prices are not expected to change till after navigation closes, which will be in about a week. Our quotations are as follows: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Building Paper—Trade still continues brisk. As a result of the extensive operations in the building trade, orders still continue to arrive quite freely. Prices are unchanged. Quotations are: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slater's felt, 60c per roll.

METALS.

The metal market in general is very firm and active. The market exhibits a better feeling than for some time past. Buyers are placing orders freely now for 1905, and thus the market is kept active. The reason for free buying on the part of Canadian buyers is of course due to the steadily advancing market in the States, in England and at home. In England pig iron is advancing, and in the States sharp advances have taken place and the market is on the advance. Canadian pig iron is hard to get, and it is impossible to buy for immediate delivery Midland, that pig iron being sold up until after the new year. The quotations for Midland No. 2 have advanced 25c. The copper market is quite strong this week, the price having advanced 1-4c per lb. There have been advances in the foreign tin markets, but no further advance has been made in the local market. The bar iron market continues firm and active.

Pig Iron—Pig iron continues to advance in the United States and in England. During the past week there have been sharp advances on the markets in the States, and there is still an upward tendency. This makes the local market

very firm, and many manufacturers are buying freely in anticipation of further advances. Canadian iron is scarce, Midland being sold up until after the new year, and thus Midland for delivery before that time cannot be secured. An advance of 25c is noted for Midland No. 2. We quote as follows:

Middlesboro, f.o.b., Toronto.....	\$18 90
Hamilton, No. 1.....	\$18 00 to 18 25
" No. 2.....	17 50 to 17 75
" No. 1, Hamilton.....	17 00 to 17 30
Midland, No. 1.....	17 00 to 18 00
" No. 2.....	17 00 to 17 50
" No. 1 f.o.b. Midland.....	16 25 to 16 75
Radnor, f.o.b. furnaces.....	27 50
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—The upward movement continues and prices are firm as below: \$1.80 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tool Steel—We quote as follows: K. Morton & Co.'s "Alpha," high speed, 65c; "M" self-hardening, 50c; Standard, \$9 to 14c; Jonas & Colver's "Novo," 65c; Wm. Jessop & Son's high speed, 60c; Standard, 14c; "Chas. Leonard," 8 to 9c; Crucible Steel Co.'s "Rex," high speed, 65 to 75c; self-hardening, 45 to 50c; special, 17c; Black Diamond, 10 to 11c; Sanderson's crucible steel, 8 to 9c; Superior, 12 to 13c. For more complete list see market quotations.

Tin—The English market continues to advance, but there has been no further advance on the local market this week. Quotations are 31 to 32c per lb.

Galvanized Sheets—Prices are firm. A good business keeps up at the prices noted. Our quotations are as follows: Queen's Head, \$4.00 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.00 for 28 gauge; Gordon Crown, \$4 for 28 gauge.

Tin Plates—An excellent demand continues, with prices steady. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

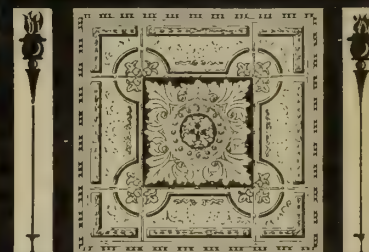
Canada Plates—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.40; half-polished, \$2.50; and all-bright, \$3.30.

Copper—There has been a further advance in ingot copper of 1-4c per lb. Ingot copper is now \$14.75 to \$15 per 100 lbs., and sheet copper \$20 per 100 lbs.

Brass—This market continues fairly active. Discounts are steady at 15 per cent.

OUR METALLIC CEILING AND WALLS

Are both artistic and serviceable.
Popularly used by practical people
everywhere.



Easily applied—most moderate in cost—fire-proof, sanitary and wonderfully durable—with countless designs to select from.

Write us for booklet telling all about them.

METALLIC ROOFING CO., Limited
Wholesale Mfrs. TORONTO, CANADA.

Lead—Prices hold firm at last week's advanced prices. A good trade is being done. Quotations are as follows: Pig lead \$3.40 to \$3.60 per 100 lbs; and bar lead \$3.60 per 100 lbs.

Spelter—There is no change in the price of zinc spelter, although zinc sheets have advanced 25 to 50c per 5 cwt casks. For zinc spelter prices are from 53-4 to 6c per lb.

Solder—This market has picked up and is active. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping, 16 1-2 to 17c.

Old Material—During the week scrap iron and copper have become firmer owing to the strong demand for pig iron and ingot copper. The market in general is in a better condition to-day than a week ago. The outlook is for an advance in the price of scrap iron, brass and copper. Prices continue unchanged with the exception of heavy yellow brass, which has advanced. Our quotations are as follows: Heavy copper and wire, 11c per lb; light copper, 10c per lb; heavy red brass, 9 1-2c per lb; heavy yellow brass, 7 1-4 to 7 1-2c lb; light brass, 5 to 5 1-2c per lb; tea lead, \$2.20 per 100 lbs; heavy lead, \$2.40 to \$2.50 per 100 lbs; scrap zinc, 3 1-2c per lb; iron, No. 1 wrought, \$9; No. 2 wrought, \$2; machinery cast scrap, \$1 1-2 to \$12.50; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 5 1-4c; per lb; country mixed rags, 65c per 100 lbs.

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL.
Room 515 McIntyre Block,
Winnipeg, Nov. 7, 1904.

THE stir of the elections has now subsided and business has about resumed a more even tenor than has been experienced for the past few weeks. Trade throughout the Northwest is now springing up to a good advantage, and the prospects are very encouraging.

The Ontario Wind Engine & Pump Co., Limited, are now located in their new warehouse on Chambers street between Logan and Henry streets. The building, which is built and equipped with the most modern improvements, has a special spur trackage which will greatly facilitate the handling of the large freight orders of their shipping department.

Work on the new J. H. Ashdown retail hardware store at Winnipeg is now progressing very rapidly, and it will only be a matter of a few weeks before the building will be in readiness to house a well assorted stock.

The C. P. R. subway at Winnipeg is

now open to the public, and traffic will continue without interruption. The delays consequent upon the stopping of long freights across Main street for many minutes at a stretch are now things of the past.

All markets continue very bright and firm with a number of important changes in the price list. There has been a decline in wire and cut nails, barb wire, plain twist, staples, and oiled annealed wire, and an advance in sheet zinc. We quote:

Barbed wire, 100 lb.....	\$2 75
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	2 75
Staples.....	3 25
Oiled annealed wire.....10	2 96
".....11	3 02
".....12	3 10
".....13	3 20
".....14	3 30
".....15	3 45
Annealed wires (uncoiled) roc. less.	

Horseshoes, iron, No. 0 to No 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 20
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Horsenails, No. 4-1 1/4 in., list price.....	0 48
" " 5-2 " ".....	0 32
" " 6-2 1/4 " ".....	0 28
" " 7-2 1/4 " ".....	0 24
" " 8-2 3/8 " ".....	0 22
" " 9-2 1/2 " ".....	0 20
" " 10-2 3/4 " ".....	0 20
" " 11-2 3/4 " ".....	0 20
" " 12-2 3/4 " ".....	0 20
" " 14-3 1/4 " ".....	0 20

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

Cut Nails—	Wire Nails—
2d 1 in.....\$4 00	1 in.....4 00
3d Fin. 1 1/4 in.....4 00	1 1/4 in.....4 00
3d 1 1/4 in.....3 65	1 1/2 ".....3 65
4d 1 1/4 in.....3 40	1 3/4 ".....3 40
5d 1 1/4 in.....3 40	2 ".....3 40
6d 2 in.....3 30	2 1/4 ".....3 30
8d 2 1/2 in.....3 15	2 1/2 ".....3 15
10d 3 in.....3 10	3 ".....3 10
20d 4 in.....3 05	3 1/2 ".....3 05
30d 4 1/2 in.....3 00	4 ".....3 05
40d 5 in.....3 00	4 1/2 ".....3 00
50d 5 1/2 in.....3 00	5 ".....3 00
60d 6 in.....3 00	5 1/2 ".....3 00
	6 ".....3 00

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 65
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00

Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10

Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10 1/2 oz.....	4 75

Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.....	11
Imitation ".....07 to 08	
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05
Tinplate, 1C charcoal, 20 x 28, box....	9 50
" IX.....	11 50
" IXX.....	13 50

Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	7 50
Broken lots.....	8 00
Pig lead, 100 lb.....	5 00
Black iron pipe, 1/4 inch.....	
" 3/4 ".....	
" 1 ".....	2 82
" 1 1/4 ".....	3 80
Black iron pipe, 3/4 inch.....	4 20
" 1 ".....	5 25
" 1 1/4 ".....	8 50
" 1 1/2 ".....	10 00
" 2 ".....	14 00

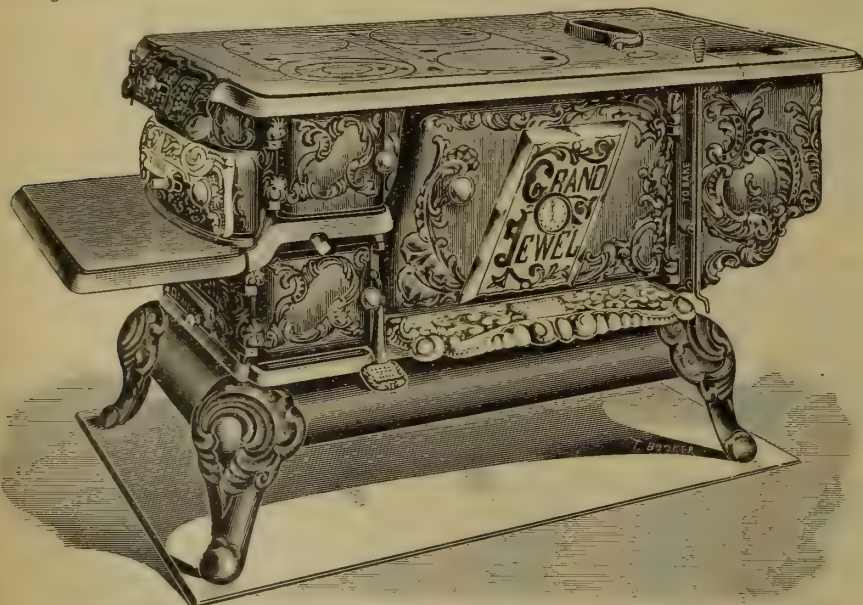
Rope, sisal, 7-16 and larger, basis.....	10 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrum.....	11 25
Solder.....	20
Axes, chopping.....\$ 6 75 to 12 00	
" double bits.....	12 00 to 18 00
Bluestone.....	5 25

Screws, flat head, iron, bright.....	.85 and 10 p.c.
Round ".....	80 p.c.
Flat " brass.....	.75 and 10 p.c.
Round ".....	.70 and 10 p.c.
Coach.....	70 p.c.

Bolts, carriage, 3/4 or smaller.....	.60 and 5 p.c.
" 7-16 and up.....	55 p.c.
Bolts, machine, 3/4 and under.....	.55 and 5 p.c.
" 7-16 and over.....	55 p.c.

The Grand Jewel Coal Cook Stove

is a new stove of the very highest class, specially adapted for burning Hard or Soft Coal; can also be used for burning Wood.



Two Sizes—Square

Duplex Grate of improved pattern. No space left between grate and fire-box linings, so that no ashes or cinders can pass between or accumulate, so as to interfere with its easy working. One movement of the crank cuts out the dead ashes and cinders and drops them into ash pan.

The Duplex Grate when reversed forms a perfect WOOD fire bottom, and with all the coal linings in position 17 inch wood can be used. Special Wood Linings can be supplied to admit wood 24 inches long.

Two Sizes—with Tank

The Oven is our standard one piece Sheet Steel Oven, same as our Grand Jewel Wood Cook, which has been so wonderfully popular and successful. This Oven will never warp nor crack. With a Steel Oven much less fuel is expended in getting up a baking heat, and less required to keep the stove running.

The Oven is well ventilated.

Oven Door Thermometer.

Water Front for either size supplied when ordered.

Manitoba
Depot

MERRICK, ANDERSON & CO.,

Winnipeg

Bolts, tire	60 and 5 p.c.
Bolt ends	55 and 5 p.c.
Sleigh shoe bolts	70 p.c.
Machine screws	70 p.c.
Plough bolts	55 and 5 p.c.
Square nuts, case lots	3c. discount.
" " small lots	2½c.
Hex " case lots	3c.
" " smaller lots	2½c.
Rivets, iron	50 and 10 p.c.
Copper, No. 8	32
" No. 12	36
Coil chain, 3-16 inch	9½
" ¼ inch	7½
" 5-16 inch	5½
" ¾ inch	5½
" 7-16 inch	4½
" ¾ inch	4½
" ¾ and ¾ inch	4
Spades and shovels	40 and 5 p.c.
Harvest tools	60 p.c.
Axe handles, turned, s. g. hickory, doz. ..	\$3 15
No. 1	1 90
No. 2	1 60
Octagon extra	2 30
No. 1	1 60
Files common	70 and 10 p.c.
Diamond	60 p.c.

Building paper:	
Anchor, plain	65c.
" tarred	70c.
Pure fibre, plain	67½c.
" tarred	80c.
Ammunition, cartridges, Dominion R.F. ..	50 p.c.
Dominion, C.F., pistol	30 p.c.
" military	15 p.c.
Ammunition, cartridges, American R.F. ..	30 p.c.
C.F. pistol	5 p.c.
C.F. military	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black	15 00
chilled, 12 gauge	16 00
soft, 10 gauge	18 00
chilled, 10 gauge	19 00
Shot, Ordinary, per 100 lb	6 00
Chilled	6 55
Powder, F.F., keg	4 70
F.F.G.	5 00
Tinware, pressed, retinned	70 and 10 p.c.
" plain	75 and 2½ p.c.
" pieced	
Japanned ware	37½ p.c.
Enamelled ware, white	45 p.c.
" Famous	50 and 10 p.c.
" Imperial	50 and 10 p.c.
Green Wire Cloth	1 55

PETROLEUM.

Water white American	27½c.
Prime white American	25½c.
Water white Canadian	25½c.
Prime white Canadian	24½c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap	5
Copper (heavy)	8½c. per lb.
Yellow brass (heavy)	7½c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead	2c. to 2½c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead	\$5 00 to \$5 50
Putty in bladder, 2½ lb., in keg of 100 lbs. ..	0 02½
Turpentine, pure, in barrels	\$ 0 87
Less than barrel lots	0 92
Linseed oil, raw	0 55
Boiled	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.75; 26 to 40, \$4.00; 41 to 50, \$4.50; 51 to 60, \$5.00; 61 to 70, \$5.00, in 100-ft. boxes.

Lubricating oils, heavy castor machine	0 29
" " extra engine	0 27
" " dynamo	0 35
" " black	0 22
" " cylinder	\$0 50 to 0 75
(as to quality)	

Harness oil	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00½
" " 2nd pressure	1 09½

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B.C., Nov. 4, 1904.

THE exports from the port of Vancouver during the past month were the largest in its history, and double the amount for the corresponding month of last year. The domestic exports were \$850,160, which shows besides the considerable increase that Canadian-manufactured goods are being shipped in larger quantities to points on the Pacific Ocean in the Orient and Australia. Shipments of salmon to the Old Country will now come under this head. Instead of the fish being shipped from the Fraser River, nearly all come to Evans, Coleman & Evans' warehouses in this city, and are loaded on to the blue funnel liners. Previously the salmon was carried on sailing vessels, which loaded at Steveston, but with the change in carriers, the export list of Vancouver port will be augmented.

* * *

Michigan lumbermen will invest considerable capital in British Columbia if the Government will protect the lumber industry from demoralization by the millmen of Washington state. It is a matter of general knowledge that the Canadian market in the Territories is almost monopolized by Americans who cut rates and make up the difference in their own protected market. If this condition of affairs is remedied, Mr. E. F. Ferris, of Traverse City, Michigan, who is at Kamloops, states that people he represents will erect a mill and spend from a quarter to half a million dollars. In the event of conditions remaining as they are, with mills failing and an average of a fire per week, they will start on a very limited scale, and endeavor to pay for the expense of holding the limits by operating a small sawmill. Mr. Ferris came to the West last January, and was so impressed with the timber in the valley of the North Thompson River, about 150 miles from Kamloops, that he had little difficulty in interesting Michigan moneyed men to put up money to secure extensive limits in the Pea Vine and Stillwater flats. About 10,000 acres of timber have been secured. Mr. Ferris leaves this week for Michigan, and when he returns in about 40 days, the survey party will have concluded its work at the limits.

* * *

William Blakemore, the well-known British Columbia mining engineer, has returned from a trip one hundred miles north-east of Edmonton, made at the request of the Edmonton Coal and Iron Company. The point is on the old Hudson's Bay trail, between Victoria and Lac la Biche, 25 miles north of the

Saskatchewan river. There is an enormous deposit of iron at that place, bog ore similar to that which has been treated for over 100 years in Quebec at the Radnor forges, now the property of the Messrs. Drummond, Montreal. It is low grade, running from 40 to 47 per cent. of peroxide of iron. The deposit is within 30 miles of the projected route of the Canadian Northern Railway. Mr. Blakemore's report on the ground is favorable, and the company will immediately start with development work. He also reported favorably on the company's coal property 25 miles south of the Saskatchewan river. There is an eight-inch seam of lignite there, similar to that at Lethbridge, making an excellent fuel.

* * *

Mr. A. J. McMillan, of Rossland, managing director of the Le Roi Mining Company, was in Vancouver this week, and brings good news of the operations in and around that city. The Le Roi is now earning good profits, largely as the result of the careful management bringing about a considerable reduction in expenses. The company is now looking into the question of concentration. "Conditions," he said, "are changing in regard to mining in the interior, and we are trying to take advantage of these conditions to build up a large and profitable Canadian industry in ways that will be made apparent in due course." Mr. McMillan says there is a distinct improvement in mining matters in Rossland district. Several new properties have started up recently, men seeming to be encouraged by the fact that ore of lower grade than formerly is now becoming valuable. It is hoped that the establishment of concentrators will do much for the district. He reports in regard to the rumors of amalgamation of a number of big mining properties in the interior that the Le Roi, War Eagle, Centre Star and Snowshoe were being examined with a view to joining forces. The big mines of the Kootenay have been working for years without making any return to shareholders, and many amongst the owners feel that smaller capital is very desirable, with concentrated management and reduction in costs, thus paving the way for dividends for those who have money invested.

* * *

The Mona asbestos claim near Kamloops is showing up well. The face of the tunnel is now in about 230 feet, and several good veins of asbestos have been crossed. The product is of fine grade.

The White Pass and Yukon Company is making inquiries throughout the north for peat, and if it is discovered it will probably be used as fuel on the company's boats on the Yukon river. There are large tundra beds in the Yukon, and

the discovery of peat will not be a surprise.

W. H. Noble, assistant commissioner of lights, of the Dominion Government service, who is on the Pacific coast, will report on the advisability of using acetylene gas in lighthouses, and also on replacing the present lights with what is called the diaphonic system. It is stated that acetylene lights may be seen nearly twice the distance of the ordinary oil flame.

The American schooner Balboa and the German barque Pallas are loading lumber at the Hastings mill, the former for Chili, and the latter for Callao.

The Kamloops Lumber Company, of which George McCormick, formerly of Orillia, is president, will very probably rebuild, and, it is stated, will instal Waterous machinery.

PITTSBURG METAL MARKET.

From the Iron Trade Review, Nov. 10, 1904.

Pig Iron—The recent advances in pig iron exceed those of any like period in recent years, and are either the forerunner of a still greater improvement in the iron and steel trade or the result of another sporadic boom through which the industry has passed on several occasions this year. Few have the courage to predict the outcome of the furnace operators' efforts a week in advance, and as they apparently control the situation at present the future rests largely with them. Bessemer is held at prices ranging from \$14 to \$14.50 furnace, and No. 2 foundry is firm at \$15.35 Pittsburgh. We revise quotations as follows:

Bessemer, Valley	\$14 00 to \$14 50
Bessemer, Pittsburgh	14 85 to 15 35
No. 1 Foundry	15 50 to 16 00
No. 2 Foundry	15 10 to 15 35
Gray forge, Pittsburgh	14 50 to 14 75
Chilled basic, Valley	14 00 to 14 50
Chilled basic, Pittsburgh	14 85 to 15 35

Steel—By agreement, members of the billet association have withdrawn official quotations and are asking premiums of 50c to \$1 a ton on material for prompt shipment. Agreed quotations are as follows: Bessemer and open-hearth billets, 4x4 in., and slabs, up to and including 0.25 carbon, \$19.50 f.o.b. mill, Pittsburgh, with actual freight added to point of delivery; 0.26 and including 0.60 carbon, \$1 advance; 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 4x4 in., \$2 advance; sheet and tin bars, \$2 advance. Bessemer and open-hearth rods are held at \$25 to \$25.50.

Rails and Track Material—While no new business is being placed with the rail mills for delivery this year, most of the mills continue in full operation.

Structural Material—The business closed by the mills is chiefly from railroads and little on building account is expected at this season of the year. Quotations are unchanged.

Bars—Demand for iron and steel bars is good but not extraordinary, the recent advance in bar iron being almost entirely due to the advance in raw material.

Pipes and Tubes—The recent advance in pipe has resulted in considerable heavy business and the trade is looking for another advance later in the month.

Sheets—The sheet market continues firm, but for prompt delivery quotations are unchanged. For delivery next year one contract was closed at an advance of \$3 a ton.

Wire and Wire Nails—Jobbers are taking advantage of the present low prices and are filling their warehouses. Quotations are unchanged as follows: Wire nails, jobbers' carload lots, \$1.60; retailers' carloads, \$1.65, and less than carloads, \$1.75; printed barb wire, \$1.75 to jobbers in carloads; retailers' carloads, \$1.80, and less than carloads, \$1.90, with 30c for galvanizing. Annealed smooth fence wire is held at \$1.45, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburgh, 60 days, with 2 per cent. discount for cash in ten days. Iron and steel cut nails are held at \$1.65 to \$1.70.

Merchant Steel—The demand for high grade steel continues to show some improvement, although there is little buying for future requirements. The shafting market is quiet.

Old Material—The market continues to advance in sympathy with pig iron, but the buying is not heavy, and thousands of tons are piled in the yards of the dealers and railroads.

Coke—Coke prices continue to advance, and while most of the contracts for furnace coke requirements for the first half of next year have already been closed, some business is still under negotiation.

BRANCH IN TORONTO.

Mr. E. D. Cleghorn, managing director of the Acme Lathe and Products Co., of Trafford Park, Manchester, England, was a caller at the Montreal office of Hardware and Metal on Saturday last. Mr. Cleghorn's firm intend establishing a branch in Toronto where they will carry a stock of cap and set screws, etc., and from that city he will have general supervision of the Canadian business. In Quebec province the firm will be represented by Mr. Wayland Williams. Mr. Cleghorn is a Canadian by birth and although he has been 18 years in the United States and nine years in England he still regards the "Land of the Maple" as his home.

LONDON METAL MARKET.

From the Metal Market Report, November 9, 1904.

Tin—Spot tin opened firm at £132 5s, futures at £131 17s 6d, and after sales of 200 tons of spot and 300 tons of futures closed steady at £132 7s 6d for spot and £132 for futures, making price as compared with yesterday 10s higher on spot and 10s higher on futures.

Singapore quotation for tin to-day was equal to \$132 London, 10s lower than yesterday's closing.

Copper—Spot copper opened firm at £68 2s 6d, futures £63 12s 6d, and after sales of 200 tons of spot and 200 tons of futures, closed firm at £63 5s for spot and £63 15s for futures, making price as compared with yesterday 3s 9d higher on spot and 3s 9d higher on futures.

Lead—The market closed at £13, making price as compared with yesterday 2s higher.

Spelter—The market closed at £24, making price as compared with yesterday 2s 6d higher.

KENTVILLE BOARD OF TRADE.

At the recent regular quarterly meeting of the Kentville, N.S., Board of Trade, a report from the merchants of the town with one exception showed a much larger business, better cash sales and fewer customers' notes in the bank this year than last. The outlook for Winter business in this section is very bright.

TRADE NOTES.

F. W. Hodson, Bolton, is putting in a stock of harness. His initial order was placed with E. N. Heney, Montreal.

H. A. Murray, tinsmith, of Burritt's Rapids, Ont., is opening a branch business at Bishop's Mills, Ont.

The Durant-Dort Carriage Co., an American concern, is to establish a branch at Sarnia, Ont.

J. W. Fleming & Son, of Blenheim, Ont., have leased the building at present occupied by J. W. McNutt, and in a few weeks will occupy it as an implement shop.

Mr. Thomas Elliott, of Perth, Ont., has sold his hardware business to Messrs. James and Reid.

RECENT TORONTO CONTRACTS.

The Bennett & Wright Co., Limited, Toronto, plumbers and steam fitters, have received the following contracts:

W. J. Gage & Co.'s new warehouse, plumbing and steam heating.

Gordon, Mackay & Co.'s new building, plumbing and steam heating.

H. S. Howland & Sons' new building, plumbing and steam heating.

WALL PAPER.

HANGING FLOCK PAPERS.

By Joseph Dillon.

THE first requisite is, an intelligent paperer one who has had experience in his art, and with sufficient pride in his work to make him aim as near perfection as a mortal may.

The flock itself must be handled with exceeding care, particularly avoiding repeated rolling and unrolling, which has a tendency to crack it and irreparably mar the artistic effect.

The application of the paste should be rapid and thorough, particularly remembering that only the best flour paste, free from various preservative agents, will insure the integrity of the delicate coloring of the flock. I strongly advise making the paste yourselves.

The edges should be trimmed after pasting, as in this way only can we be certain of an even pasting of the surface, without the danger of paste-smeared edges.

The paper should not be allowed to lie on the pasting board long after the paste has been applied, permitting the moisture of the paste to strike through the ground of the flock, and perhaps producing a permanent stain, but it should be transferred with reasonable rapidity from the pasting board to the wall, which has previously been properly cleaned and lined with good lining stock.

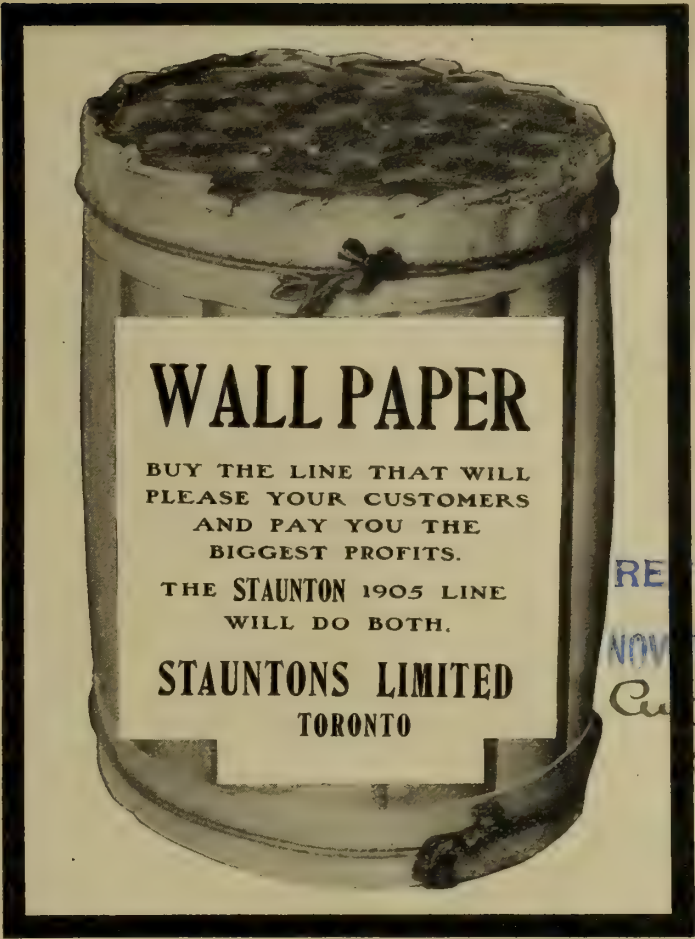
Probably on no one detail will so much of the success of the hanging of a flock depend as upon the careful butting and setting of the edges. Avoid rolling the edges, butt the flock true and flatten with a soft brush; avoid any extra pressure on any one part of the paper and treat all in the same manner. Any paste spots will ruin the work, and no amount of trade juggling will remedy it. Its cure lies in its prevention.

One word more, and you will have the gist of my experience in flock hanging: Avoid the hanging of flocks or any delicate goods in damp weather. The moisture is sure to penetrate the paper, thus preventing the firm grip which the setting paste would otherwise take, leading to the formation of blisters and the separation of the paper edges and causing for the manufacturer of that paper an undeserved complaint. I consider it safe to state that 90 per cent. is owing to defective hanging, and not to the manufacture of the goods.

AN ADVERTISEMENT.

IN the following advertisement used by a prominent manufacturer of the United States there are several ideas that can be made use of in retail advertising. The plan was catchy at any rate:

Have you ever been
Persuaded
Just to try
One of those
Six-fifty



Hand-me-down
Fit-anybody suits of clothes?
Then slunk home by the back way
And had a fit
And finally you give the suit
To some poor relative
And go and blow
Yourself to a
Silk-lined
Custom-made
A No. 1 west-end suit
In buying wall paper.
It's just the same.
Don't be persuaded
To buy
Any old thing
Just because
It's cheaper
Get the real stuff
From ———.

MOIRE PAPERS.

The moire papers for ceilings and for wall panels continue to find an extensive sale. Several effective designs are shown by Stauntons Limited, wall paper manufacturers, Toronto, and are extremely decorative. Prices are moderate and allow of a good profit to the dealer. This firm is also showing an extension with corners to match, suitable for panelling for walls and ceilings. Samples of these may be had at any time on application by wall paper dealers.

PAINT, OIL AND BRUSH TRADES

Regarding Linseed Oil.

"LINOEL" writes to the Oil and Colorman's Journal an interesting letter which is headed "A Vital Point for Purchasers of Linseed Oil." It is as follows:

Users of linseed oil in the varnish, linoleum, paint, and allied trades are constantly finding that they get varying results, according to the batches of oil used. The varnish maker complains that the oil "breaks" under heat, gives a non-elastic product, or one that "blooms"; the painter finds his paint crack, does not dry hard, etc.; and the linoleum manufacturer finds he gets a cement that does not set well, and gives with the cork an inferior product; if used for tarpaulins, the dried oil may soon become soft and absorbent; and for these variations in behaviour hardly any two users give the same explanation, though all agree the oil is at fault. Various suggestions, such as adulteration with fish, pine, or hydrocarbon oils, too much "fat" present, newness of seed or admixture; plate seed oil, to cheapen the cost of East Indian or Baltic seed oil, are freely made as reasons why linseed oil nowadays is distinctly inferior to what it used to be in days gone by. The chemist has at his disposal an array of delicate tests to demonstrate the purity of the oil, such as the low flash point, its distinctive taste and smell as proving the presence of lighter oils, the mixed acid test, as given in these columns, to show admixture of La Plata oil, gravity tests, iodine number, weight of oxygen absorbed in a given time, etc. An oil may successfully pass these tests, and be certified as pure and of good quality, and yet be totally unfitted for the purchaser's use, and may exhibit all the faults previously mentioned. After an experience extending over a long period, and the treatment and testing of a large number of samples, the writer is of opinion that nearly all the difficulties experienced by users of genuine linseed oil, lie not so much in the admixture of the seed of various growths, but in want of maturity of the oil itself. The main point, however, is that it lies in the power of every user, by a certain and simple test that can be applied in five minutes, to distinguish with certainty an oil that is unfitted for his purpose if good results are desired. If anyone will take a test tube, say, $\frac{3}{4}$ -in.

diameter, half full of freshly-made linseed oil, and apply heat until the dense fumes given off flash or burn, he will find, notwithstanding the oil may have been carefully filtered, and be perfectly bright, that large flocks of gelatinous-like matter are formed, sometimes amounting to 20 per cent. or 25 per cent. by bulk of the oil treated; this is technically known as breaking, or "spawning." If the contents of the tube are allowed to cool, and are poured on glass, a very irregular surface results, showing that the oil is not matured, since if an oil of similar quality be retained in tank it gradually loses its tendency to spawn or form flocks, until, after two or three years' storage, it remains clear and bright, even if heated until the fumes burn quietly, and can then be used with safety and satisfaction for any class of work. The albuminous or flocculent matter appears by age to have become absorbed by the oil; it tends to give in-

creased toughness and backbone in use. Many users are aware of this, and go to the expense of tanking their oil for a long period before using, and they find that their products are correspondingly increased in quality and uniformity. The test given above, though proving that an oil is unsuitable, does not prove an oil to have been tanked for any length of time, as some firms are able to produce by chemical treatment an oil which, though new, will successfully pass this test. This treatment is usually alkaline in character, and consists in removing the "spawn, or albuminous matter, and at the same time the free fatty acids are removed also, the resultant oil commanding a higher price as standing heat without "spawning." This oil does not and can never take the place of a genuine oil, as it tends to produce a finished article, wanting in toughness and body, one or more of the important constituents of the oil having been removed.

Your present profits larger and a future trade established if you handle



Hollywood Paints
Elastilite Varnish
Granitine Floor Finish
Orolite Oil Finish
Mangalite Drier
M. L. Coach Enamel
M. L. Varnish Stain
Chijap Floor Lac

and our other specialties.

THEY WEAR ON THE JOB, NOT OFF IT.

The Imperial Varnish & Color Co.
TORONTO, ONTARIO, CANADA. LIMITED,

If You Buy

Varnishes	Paints
Japans	Colors
Lacquers	Glues
Stains	Bronzes
Fillers	Chamois
	Sponges

WRITE TO

R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.

Good Better Best

The price of an article is a very good thing to look at, but the quality of such article is more important. So put both together and all oil dealers say that Livingston's pure raw and boiled Linseed Oil is the best thing to have in stock.

Why put off till to-morrow what you can do to-day? Now that the Fall and Winter months are upon us we begin to feel like having everything secure, and we cannot put aside our Summer utensils without seeing that they are well taken care of and you have sufficient oil for your Winter requirements.

Experience is the best teacher and after forty years' experience we know what you want. Livingston's Linseed Oil, manufactured by

The Dominion Linseed Oil Co.
Limited

WRITE FOR PRICES.

HEAD OFFICE: 34 YONGE ST., TORONTO.

 FACTORIES: BADEN, FLORA, GUE PH, OWEN SOUND, ONT.
and 31 Mill Street, MONTREAL.

BOECKH'S BRUSHES

are based on scientific standards,
backed by first quality materials and
A1 workmanship, and are therefore

**UNSURPASSED IN
ACTUAL VALUE**

Comparison is in their favor, but their
true value is in the using, which invari-
ably makes satisfied customers.

"The Standard Goods of Canada."

United Factories, Limited,

Head Office: TORONTO.


 BRANCHES:
MONTREAL
LONDON

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Nov. 10, 1904.

NO notable change has taken place in paint and oil staples and prices are being maintained in a steady manner. A busy air is in evidence at the different factories, as is usual before the advance in rail rates. Stocks of all kinds seem to be ample and orders are cleared off the list very briskly. One of the features of the week has been the extraordinary call for putty from all parts of the Dominion, builders evidently being anxious to do as much glazing as possible before the extreme cold weather sets in. The last few days of Wintry weather have assisted in stimulating the demand. The various furniture and carriage factories seem to be well employed and their orders are of fairly large proportions.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2 \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 61-2c; No 1 zinc, in casks, 5c; in 100 lb. kegs, 51-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1. 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 71-4c; smaller quantities, 81-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 51-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Turpentine—Single barrels, 81 1-2c per gallon; two to four barrels, 80 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs. The above prices are net 30 days; for longer terms prices are higher. The market is firm.

Linseed Oil—Raw, 1 to 4 barrels 44 to 45c; 5 to 9 barrels, 43 to 44c; boiled, 1 to 4 barrels, 47 to 48c; 5 to 9 barrels, 46 to 47c. Delivered in Ontario between

Montreal and Oshawa at 2c per gallon in advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Nov. 11, 1904.

THERE has been considerable excitement in the shellac market for the week under review on account of a report that the London market is short of shellac gum and that prices have consequently advanced from 5 to 6c per lb. Locally prices have not yet been affected. The turpentine market is easier than it was a week ago and prices have dropped 2c on single barrels and bulk of from 2 to 4 barrels respectively.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lbs. and upwards: 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs., \$4.25; ditto, in kegs of 100 lbs., \$4.50; No. 1, in casks of 560 lbs., \$3.75 to \$4; ditto, in kegs of 100 lbs., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$3 to \$3.10; white, \$3.10 to \$3.20 per gallon; No. 1 (orange), \$2.50.

Linseed Oil—Our quotation is: Raw. 1 to 4 bbls, 45c; boiled 48c; 5 to 9 bbls, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 77c; 2 to 4 bbls, 76c, Toronto; 5 bbls and over, f.o.b. point of shipment, net 30 days. For

less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 81-2c per lb.; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground 10 1-2c; finest American white, 19c; No 1 American white, 15c per lb.

Putty—Ordinary, bladders in barrels, \$1.65; pure linseed oil, \$2 to \$2.10; bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 71-2c per lb. and 81-2 for single tins.

Window Glass.

MONTREAL.

Advices from Belgium state that no more orders can be placed for glass and few of those now in are likely to be filled. The price in Montreal has been maintained in the face of every reason for an advance. The demand has been unusually large lately and jobbers' stocks are fast being depleted. Greater activity in building trade has called for larger quantities than was expected. The outcome will be that in the very near future a partial glass famine may be looked for and in some lines the retailer will not be able to restock at any price. We quote: First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is



CONSPICUOUS success has attended us during the past months. We have not only had an exceedingly satisfactory output, but we have added a goodly number of new customers. They will stick to us like glue—trust us for that. We'll give them the best

PAINTS, OILS, AND VARNISHES

they ever had in their lives. No use trying to build up a business that won't stick, is there?

STANDARD PAINT & VARNISH CO., Limited, WINDSOR, CANADA

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

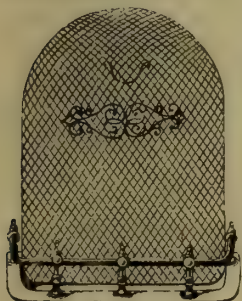
R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



Wire Spark Guards

Polished Brass and Enamelled

Catalogue on request

DENNIS WIRE & IRON CO.,
LONDON, ONT.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

ABOUT GLUES

What kinds do you handle? Are you and your customers satisfied? Perhaps we can give you a better article at a fairer figure. Our SCOTCH GLUES will be found of exceptional strength, and equal to many glues for which much higher prices are charged. Let us send samples.

GROVE CHEMICAL CO. Ltd, Appley Bridge, Lancashire, Eng.

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works or from the principal Color Dealers in Canada



"ISLAND CITY" GOLD PAINT

for decorative work is a winner these days. Are you getting your share of the profits? How is your stock?

P. D. DODS & CO., Montreal Toronto Vancouver

Address Enquiries to Head Office,
Montreal.

Cable Address, "Elephant," Montreal.
A. B. C. Code used.

THE CANADA PAINT COMPANY, LIMITED

Manufacturers of Colors, Paints and
Varnishes.

Factories, Montreal.

Factories, Toronto.

STRUCTURAL & MACHINERY

PAINTS

Machine Graphite Filler.
Machine Graphite Paint.
Diamond Graphite Paint.
Magnetic Iron Paint.
Loco. Smoke Stack Black.
Loco. Varnishes and Japans.
Engine Paints and Enamels.
Lacquers in all Shades.
Aluminum Liquid Paint.

STEAMBOAT & MARINE

PAINTS

"Elephant" White Lead.
"Elephant" Snow White Zinc
Amberite Art Enamels.
Interior and Exterior Paints.
Amberite Spar Varnish.
Aird-Felch Patent Boat Bottom
Composition.
Munro's Anti-Fouling Copper
Paint.
Smoke Stack Paints.
Hull, Deck and Spar Paints.
Gold Paint.

THE CANADA PAINT COMPANY, Limited

Head Office and Works,
FIVE HUNDRED AND
SEVENTY-TWO WILLIAM ST.,
MONTREAL, Canada.

32 1-3 per cent. Terms four months,
and 3 per cent discount thirty days.

TORONTO.

The window glass situation continues firm. There will be no further shipments of glass this season after present contracts have been filled and it would not be a surprise to the trade if shipments stopped even before that. For prices on window glass see prices current.

Petroleum.

Refined—The demand continues strong and prices are firm. Several heavy consumers are taking advantage of cheap freight rates by water before navigation closes. Our quotations are as follows: Refined Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 18 1-2c ex warehouse.

Crude—Present conditions continue unchanged with no indication of a change. Our quotations are as follows: Pennsylvania, \$1.56; Corning, \$1.41; Newcastle, \$1.43; North Lima, \$1.05; Tiena, \$1.71; South Lima, \$1; Whitehouse, \$1; Somerset, \$1; Indiana, \$1; Canadian, \$1.53.

Turpentine in New York.

Stocks on spot are small but prices have declined owing to an easier tendency in the Savannah markets. Advices received from the south report an easier market for lower grades and it is believed that some c.i.f. business has been transacted, supplies to be shipped at the week end at 5c below the basis of prices quoted locally.

Foreign Flaxseed Market.

According to the Paint, Oil and Drug Review, Chicago, the flaxseed market is firm on light supplies rather than on any special demand. All the American seed crushers are running light just now, some of them on half time or less, and the demand for seed for crushing purposes is correspondingly small. The seed market is holding up well under the circumstances. If the expected receipts of seed come in there may be a corresponding decline.

Plate Glass Combine Rumored.

DESPITE denials of the rumors of a plate glass combination, the Pittsburgh Times reiterates the story and gives lengthy details. The Times declares that a new combination of plate glass interests with a capital stock of \$12,500,000 is being formed. Prominent holders of the issues of the Pittsburgh Plate Glass Company are said to be the financial power behind the

new combination, and it is reported that C. B. McLean, president of the Lincoln National Bank, is securing the options on the various independent plants which will form the proposed combination.

While the holding company will only be capitalized at \$12,500,000, after all negotiations of the merger have been concluded it is believed the Pittsburgh Plate Glass Company will be taken in as the head of the new combine and that the stock of the big concern may be increased to \$25,000,000, or perhaps double that amount.

After the proposed merger has been completed, it is the intention of those backing the combination to raise the price of plate glass 15 cents per square foot, making a total advance of over 50 per cent. above the present prices. The argument is advanced that plate glass is now being sold very low, and with the new combination working, the independent plants remaining out of the combination will have but a small chance of competing with the new corporation.

The negotiations for the big merger have been in progress for some time, and it was learned by a representative of the Pittsburgh paper that options have been secured upon a majority of the shares of stock in almost every plant desired by the proposed new concern.

The recent advances in the price of the stock of the Pittsburgh Plate Glass Company on the local stock exchange are said to be based on the definite report that the combination is almost completed, and stockholders of that company are said to be increasing their holdings in contemplation of the new combine.

If the plans of the officials of the Pittsburgh Plate Glass Company are worked out the new combination will be one of the strongest ever formed in the United States. It is the intention of those interested in the new concern to get the plants all down as near their actual values as possible, and the new combination will be operated upon the same conservative lines which have prevailed in the Pittsburgh Plate Glass Company ever since the organization of that company.

Just how many independent plants will be in the new organization could not be learned, but the Times says that options have been secured on a majority of the following concerns: Kittanning Plate Glass Company, Kittanning, Pa.; Columbia Plate Glass Company, Blairsville, Pa.; Standard Plate Glass Company, Butler, Pa.; Allegheny Plate Glass Company, Hite Station, Pa.; St. Louis Plate Glass Company, St. Louis; Penn American Plate Glass Company, Kokomo, Ind.; Saginaw Plate Glass Company, Saginaw, Mich., and the Ford Plate Glass Company, Toledo, O.—Paint, Oil and Drug Review.

IT'S JUST LIKE THIS:

Our Company has a million of money back of it, and more. Money alone won't make a good Stock Food, but you can't get a million of money to invest in a Stock Food that isn't good, that won't "make good." But it takes well onto a million now-a-days to market an article quickly, effectively.

INTERNATIONAL STOCK FOOD

is to-day the preferred food in the United States; likewise in Canada. Part of our million goes towards advertising, in assisting our agents to sell International Stock Food with the least possible effort. You can act as our agent in your section.

We have an interesting proposal to make to you. Write for it.

INTERNATIONAL STOCK FOOD CO., TORONTO.



Fine Horses and Cattle, Pigs and Sheep

are made so through good feeding. Farmers are using Stock Foods. Those who are best informed prefer

Colonial Stock Food

Don't take our word—let us send you letters from farmers and from dealers.

It pays to sell our Food and the prices to the dealer are wonderfully generous—the margins in **Colonial Stock Food** and in **Colonial Poultry Food** are big.

Write us for terms.

COLONIAL STOCK FOOD CO.

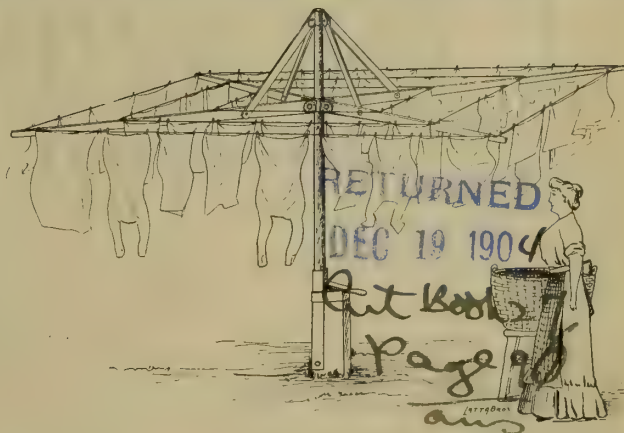
79-81 WILLIAM STREET, TORONTO

Plant your

Clothes Reels

Before the ground freezes up.

There is no better kind than the "Davis," cut of which appears herewith. Send for circular and price list. You want a reel for your own yard and they sell well.



Waggoner Extension Ladders

Your eavetroughers, painters, fruit pickers, farmers, etc., want a safe and handy ladder, and perhaps you want one for your house for putting up storm sash, cleaning eavetrough, washing windows, etc.

Your painter customers want trestles also. We make the lightest and handiest in existence.

Send for our catalogue, circulars and price list.

The Waggoner Ladder Company, Limited, London, Ont.

Western dealers write to E. H. Briggs & Co., Winnipeg, our western agents.

Made in Canada

The steel rail mill of
The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.
is now in operation and turning out

A. S. C. E.
Standard
Section

STEEL RAILS

of
Highest
Quality

Your specification will have our best attention.

Offices:

Canada Life Bldg.,
MONTREAL.

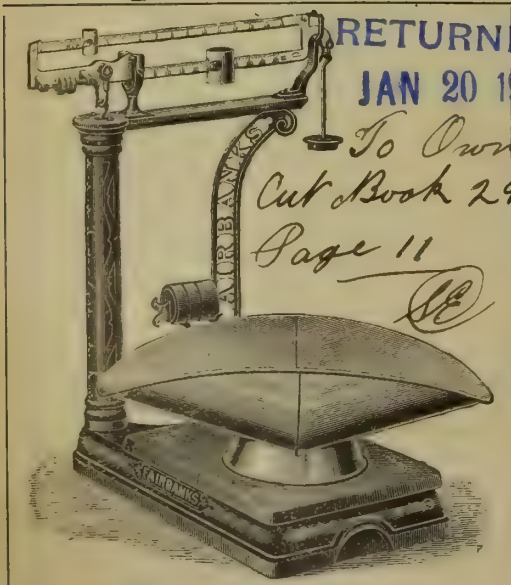
100 King St. West,
TORONTO.

Drummond, McCall & Co.

General Sales Agents

The Algoma Steel Co., Limited

FRENZIED FINANCE



RETURNED is a term that could be fittingly applied to the weighing methods of many merchants of to-day.

The fault in some cases is with the merchants. In most cases however the scale is to blame. Mr. Hardware Dealer, you should be particularly careful. If you are not you are robbing yourself. A Fairbanks Standard Scale is the best guard you can get. The one we illustrate here has been constructed to combine great convenience with a very handsome appearance. Weighs up to 250 lbs., and can be used with or without scoop. It is particularly adapted for hardware dealers.

Get a Fairbanks Scale "IT SERVES YOU RIGHT."

SEND FOR SCALE CATALOGUE.

THE FAIRBANKS CO.

MONTREAL

TORONTO

VANCOUVER

WINNIPEG

MACHINERY

THE MACHINERY MARKETS. Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Nov. 10, 1904.

A SOMEWHAT steadier feeling is experienced in the machinery market this week, and dealers express greater hope for increased sales, and a larger volume of trade in the near future. Conditions are hardly as they were before the announcement was made regarding the recent election; but it is expected that matters will soon again have assumed a normal condition. Inquiries are much more numerous, but a feeling of lethargy seems to prevail. Few sales are reported in machine tools and in engines and boilers there is little business passing. None of the machinery manufacturing companies are rushing with full staffs, and one large corporation which employs several hundred men has over one hundred laid off at present. The directors and superintendents of these firms state, however, that they expect within a very few weeks to be running with full forces. Electrical machinery seems to be the only bright spot on this market at present.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, Nov. 11, 1904.

IT is reported by local dealers that prospects in the machinery line are very good. Not only are substantial orders being placed, but inquiries are most encouraging, and will probably lead up to definite results.

The leaders of the market are engines and boilers and saw mill outfits, but a good number of inquiries are coming in for other lines.

Machinery and Electrical Notes.

There is a rumor current that a Mr. Worby intends erecting an electric light plant at Sherman Falls, Que.

Moses & Son, of Carp, will erect a new mill for the manufacturing of cheese box veneers, etc at Farrelton.

The Walsh tannery of Peterborough are going to enlarge their plant and a

company has been incorporated for the purpose.

The electric light plant at Paisley, Ont., has come under a new management. The new manager, Mr. Kissock, purposes making extensive improvements.

Calgary Council has offered E. M. Moyer & Co. exemption from taxes for ten years on condition that they locate a factory in the city to manufacture school furniture.

The Levy, Weston & McLean Machinery Co., Limited, Toronto, has just booked a large order for New Ontario. The shipment will consist of engine and boiler and a saw mill outfit.

"Which is Engine of the Future?"

HARDWARE AND METAL is still receiving opinions on this subject from those whose experience and position well qualify them to speak with authority.

ALLIS-CHALMERS-BULLOCK.

C. W. Johnston, superintendent of the Allis-Chalmers-Bullock Works, at Rockfield, said, regarding the question, that as far as present developments went, the steam turbine was little past the experimental stage, and that the steam engine would command a leading place for quite a few years to come. Although the steam turbine has been installed and at present running successfully in power houses and other places, they have not yet been running long enough to warrant their wholesale introduction. It is not yet known whether the metal composing the moving parts of the turbine will have any considerable duration, owing to the strains set up by the high velocities necessary. Mr. Johnston thinks that manufacturers of steam engines will have considerable work to keep up with orders for a long time to come.

JOHN M'DOUGALL CO.

P. Bain, chief draughtsman for the John McDougall Caledonia Iron Works Co., and instructor in steam engineering at the Montreal Y.M.C.A., said: "While not attempting to underestimate the possibilities of great revolutions in the

generation, development, and application of power in the future, I am of opinion that the steam engine as a reciprocating machine, holding we might say universal sway at the present time, will still continue to hold the place in preference to other machines. I am convinced that as long as there are coal and oil in the bowels of the earth, and timber on its surface, men will look upon it much as a horse is looked at in relation to the automobile, viz., its good points are quite as good as those of its competitor, and its adaptability being equally pronounced. Reciprocating steam engine has its defects, we all know, but these, as far as mechanical considerations go, are being reduced to a minimum, and when the pull comes, as come, I daresay it will, I am convinced that, as in the case of the Scotch boiler and the water tube boiler, there will be found, not only champions, but also abundant proof to show that an old dog is still good for a hard tussle. For all general purposes, and specific purposes as well, the reciprocating steam engine will continue to lead. We move fast these days and radical changes come about suddenly, yet appearances do not at present point to any decided revolution in the direction of power application."

Largest Generating Unit at World's Fair.

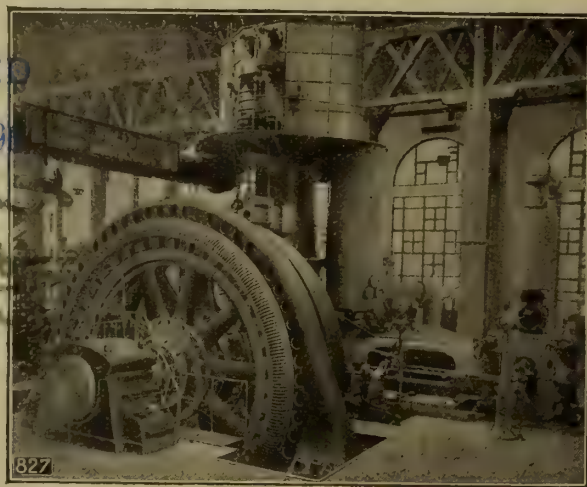
THIS great unit was installed not only as an exhibit, but plays an important part in furnishing power for the decorative lighting and for the street railway lines leading to the exposition grounds. During the day time from two o'clock in the afternoon until seven in the evening, this engine and generator supply current to the St. Louis Transit Co. for operating street cars from St. Louis to the fair. This load is about 3000 h. p. The engine is frequently called upon for other work, such as furnishing current for operating the pumps supplying the Cascades, or for supplying power for the many purposes about the fair.

In the evening the task of this unit is even greater as it carries the current for nearly 200,000 8-cp incandescent lamps. This myriad of lights, marking

every architectural outline of the picture, becomes visible as the dim glow of red gradually appears. Slowly this grows brighter until the whole picture is drawn in lines and accents of fire, and then as the voltage is increased, the lamps gradually become fully incandescent. A visit to the big unit will show how this is accomplished. At one corner of the exhibit stands a square cage filled with gridiron-shaped pieces of metal. This is a rheostat, the purpose of which is to absorb the current created by the exciter for the generator of the big engine and regulate it until wanted. On its face is an arm which revolves a large number of contacts. As this makes a turn it cuts out, bit by bit, the resistance of the rheostat. On top of the cage is a little electric motor which, by means of a chain belt, turns the arm of the rheostat. When the time for lighting arrives an operator at the

pounded and condensing running at 75 r. p. m., steam pressure 150 pounds, and the height of the engine above the foundation is 39 ft. 2 in.

The regulator of the engine is of the center-weighted, fly-wheel type, and actuates the cut-off cam of both high and low-pressure cylinders. The speed of the engine can be increased or decreased several revolutions per minute. This is accomplished by an adjustable weight mounted in a yoke on the regular cross-shaft. By moving this weight in either direction from its central position, which is neutral, the effect is equivalent to increasing or decreasing the centre-weight of the regulator. An electric synchronizing device is attached, to be used while operating the generator in multiple with others. A small, reversible electric motor is mounted upon the regulator column in a manner similar to the hand speed-changing device



Large Allis-Chalmers-Bullock Generating Unit.

main switchboard touches a button and the little motor begins to move. As the resistance of the rheostat is gradually cut out the whole number of the decorative lights over the entire fair begin to glow feebly, but all alike, and then to gain in volume of light all in accord, as the arm progresses about its circle. One may see the entire operation by standing beside the rheostat at dusk.

The engine was of the style designed by the Allis-Chalmers Co. for the Manhattan power station in New York City, where the current for operating the trains of the elevated railway is produced. The low pressure cylinder of the Louisiana Purchase Exposition engine is six inches larger than those of the Manhattan installation, thus constituting it the largest single engine of its kind ever made, and by far the largest ever shown at a World's Fair. It is capable when worked to its full capacity of producing 8,000 h. p. The engine is a combined vertical and horizontal com-

previously described. This motor is operated from the main switchboard by means of a double-throw switch. The motor itself forms the weight for varying the speed, and is made to travel in a frame by means of gears and a threaded spindle.

When it is desired to get the generator "in step" with others in operation, the switchboard operator can instantly bring the machine to synchronism by means of the switch-controlling motor on the regulator. An ingenious but simple arrangement is provided to prevent damage to the motor or its attachments, if at any time it should be allowed to run to either extreme of its travel. The gear turning on the threaded spindle, previously described, engages the latter through a clutch, causing the spindle and gear to revolve together, thus preventing the motor from advancing in its mounting, though it may still continue to run. This obviates the use of cut-out switches on the motor.

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	19 00
25 " " 6 months.....	29 00
" " 1 year.....	10 00

MACHINERY WANTED.

Items under this heading inserted free for readers of HARDWARE AND METAL.

ELECTRIC LIGHT MOTOR WANTED—Incandescent; about 50 lights. Address E. Smith Basket and Veneer Co., Leamington, Ont.

SMOKESTACK WANTED—40 or 50 feet of 24 inch stack; new or second-hand; in first-class condition; also small lath machine. Box 80, Providence Bay, Ont.

TRIPLE EXPANSION ENGINE—Having high pressure; about 4 x 6; state full particulars. H. C. Minett, Minett P.O.

WANTED—Second-hand Gasoline Engine. 15 h.p., with 3½ in. pulley. Must be in good repair and cheap. James Leach, Eden, Ont.

WANTED—Second-hand 25 h.p. firebox boiler; must be first-class. Address Box 308, Petrolea, Ont.

WANTED—10 h.p. Motor of 110 volts. State how long in use and lowest price. Address P.O. Box 378, Winnipeg.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ALTERNATING MOTORS and electrical machinery; all sizes; for power and light. Jones-Moore Electric Co., Limited.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, HARDWARE AND METAL, Montreal.

ENGINE FOR SALE—20 h.p.; stationary, side crank. Price \$80. Address Box 41, HARDWARE AND METAL, Montreal.

GAS AND GASOLINE ENGINES—None better; write for prices and particulars. Tuerk Iron Works, Berlin.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.

STEEL CASTINGS—Equal to any foreign made ones, can be had from the Wm. Kennedy & Sons, Limited, Owen Sound.

WORK AND
PRICES
RIGHT
GALVANIZING
ONT.
WIND
ENGINE & PUMP CO.
TORONTO, ONT. LIM:TED

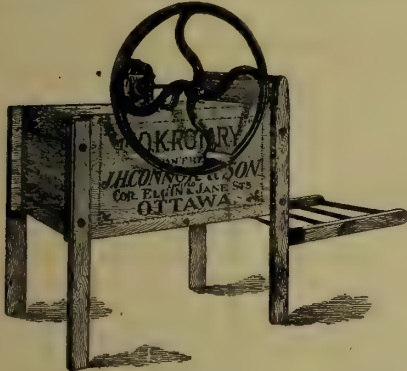
"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works
"Machinery," Newport. NEWPORT, MON., ENGLAND

CONNOR'S O. K. ROTARY WASHER.

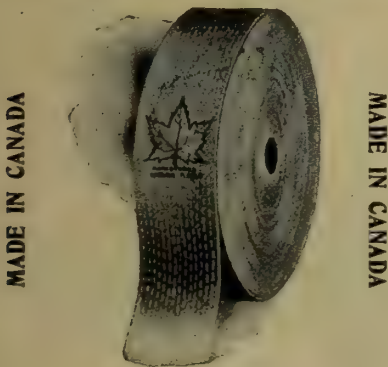


No experiment, but a trade winner. Dealers who handle this washer say they sell easier than any other. Write for our catalogue and price list.

J. H. CONNOR & SON, LTD., Manufacturers OTTAWA.

"MAPLE LEAF"

Stitched Cotton Duck Belting



"Maple Leaf" is made of the best cotton duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.

"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying

Main Drive Belts a specialty.

Ask for "Maple Leaf" and take no other.

Beware of Imitations

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY
HAMILTON, ONTARIO. Limited

Use our "MAPLE LEAF" Belt Dressing.

If you use, make or buy repetition parts made from the bar, in Brass, Steel or Iron, in air quantities, it will most likely save you money to let us make them for you. Anyway, we will be much pleased to quote you for comparison, if you will favor us with samples, limits you require and quantities you use. We can promise good deliveries, too.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

Clauss Brand DENTAL SNIPS

Fully Warranted

Manufactured from select stock.
Steel Faced on Composition Metal.
We suggest Dealers giving these a trial, as the same usually find an early purchaser.

Write for trade discount.



CLAUSS SHEAR CO., 169 Spadina Ave., Toronto, Ont.

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels

Superior in Design, Workmanship and Finish, and the most popular Gun on the Market.



Simplest
"Take Down"
Gun Made

HARRINGTON & RICHARDSON ARMS CO.
Also makers of H. & R. Revolvers.
Catalog on request. Worcester, Mass., U.S.A.

BABBIT

NO. 1
STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL

QUALITY & PRICE TO SUIT
ALL GRADES OF WORK

THE CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



**FIRE DOGS
SMOKE GUARDS
FENDERS, SCREENS**
CARRIED IN STOCK

Send for Bulletin No. 20.

CANADA FOUNDRY CO., Limited
HEAD OFFICE, TORONTO.

DISTRICT OFFICES,
MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
CALGARY, VANCOUVER, ROSSLAND.

Novelty in Inventions.

“In England the announcement has at last been officially made that the provision of the Patent Act of 1902, dealing with the searching for novelty by the patent office, in all its applications for patents, is to be enforced on and from January, 1905,” says the Practical Engineer. “It will give very general satisfaction, as it will tend towards the removal of one of the long standing grievances that inventors of that country have, as against the methods and practices of other leading countries towards their inventors.”

“By the new regulations that have been in abeyance so long, pending the proper accommodations and provision for carrying out such search at the patent office, it will now be no longer permissible for an applicant to obtain a patent for an invention that has been previously patented during the last fifty years. There will also be a check administered to those individuals practicing under such names, and in a peculiar manner as patentees agents, or agents for obtaining patents, and sometimes too as consulting engineers, or as ordinary patent agents, who live upon the vanity and cupidity of the little inventor who pro-

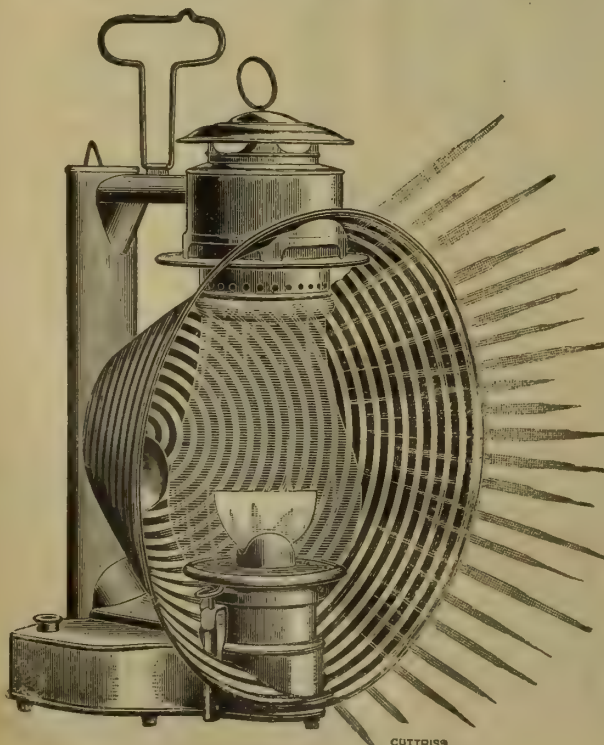
duces a device, possessing no novelty, as against that which is well-known already, and as to which any high-class patent agent would advise him to stop wasting his money upon. The method to be introduced is an advance upon the German and American practice, for in those countries it is frequently impossible to obtain a patent, because of the inability of the patent office examiner to appreciate the effect of an apparently small alteration in the methods of construction, or new processes put forward by applicants, although such alteration and variation are of the greatest utility and importance to the inventors and strongly appreciated by those who are practically familiar with the older methods cited by the examiner. The new British system has been very generally approved by leading patent attorneys in America and Germany, as they recognize the injustice that is officially done an inventor who devises ways and means for remedying defects of older and somewhat similar inventions.

“Under the new system the patent office will, after having searched over the past fifty years files, either call upon the inventor to amend his specifications, or they will require him to insert with-

in such specification a statement that he is aware of the patent specification which will then be distinctly referred to by name and number. He then has no claim to anything contained therein, but what he does claim will then follow in the usual manner at the end of the specification.

“By this system the patentee is permitted to take the risk and is not prejudiced by having his patent refused. On the other hand if there is any suggestion that his patent conflicts with the earlier ones that possibility will be made perfectly clear and the public generally put upon its guard against attaching too wide a scope to the claims the patentee might otherwise be tempted to make. In engineering inventions particularly, it is more commonly a matter of detail that is open for improvement, than a radical variation of principle. To refuse therefore to recognize the advantage of a new force, or a new combination because similar members have been employed in a somewhat similar manner in the past, would be to arrest the march of mechanical progress and to bar the introduction of various types of machines and appliances all having somewhat similar principles involved in their make-up and having the same ends in view.”

E. T. WRIGHT & CO., HAMILTON CANADA



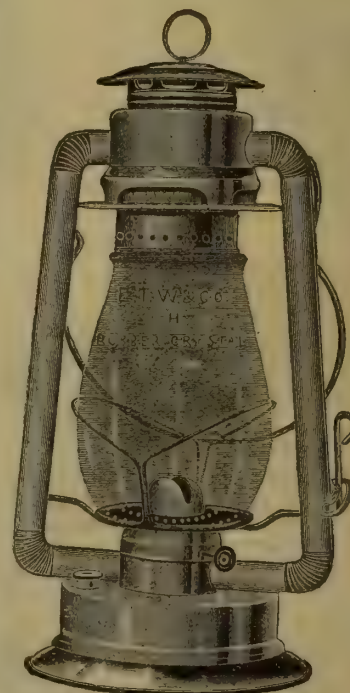
No. 20—Search Light—Pattern 1904.

Manufacturers of the largest line of lanterns under the British flag. We make lanterns for the farmer, the artisan, the horseman, and the railway company.

Ask for and accept only WRIGHT'S make of lanterns.

They are the best.

The above cut shows the side lift, but we supply the same lantern with the front lift, (No. 2.) We have this lantern in Plain Tin, Japanned, Brass Well, Brass Foot, all Brass and with Dush Board.



No. 4—Cold Blast Lantern

When placing your order for Lanterns, ask for **Wright's Cold Blast Lantern**, which is the only genuine cold blast lantern made. They are the best, and we will guarantee prices against all other makers for this season and for next.

We are getting out a new Well on our No. 2 and No. 4 cold blast lanterns for the balance of the season and 1905. Try sample dozen.

THE FISHER TUBE SKATE



THE LIGHTEST, STRONGEST,
EASIEST RUNNING AND
PRETTIEST SKATE
IN THE WORLD.

Dealers:

It will pay you to handle the Fisher Tube Skate, there is a demand for them.

The large makers of ordinary skates are now compelled to make Tube Skates. It will take them years to get to our standard. Tube skates are not made like ordinary skates.

Write to-day for Catalogue and Prices.

The **A. D. FISHER CO., Limited**
34 Richmond Street East
TORONTO

A PERMANENT
and Handsome Roof.



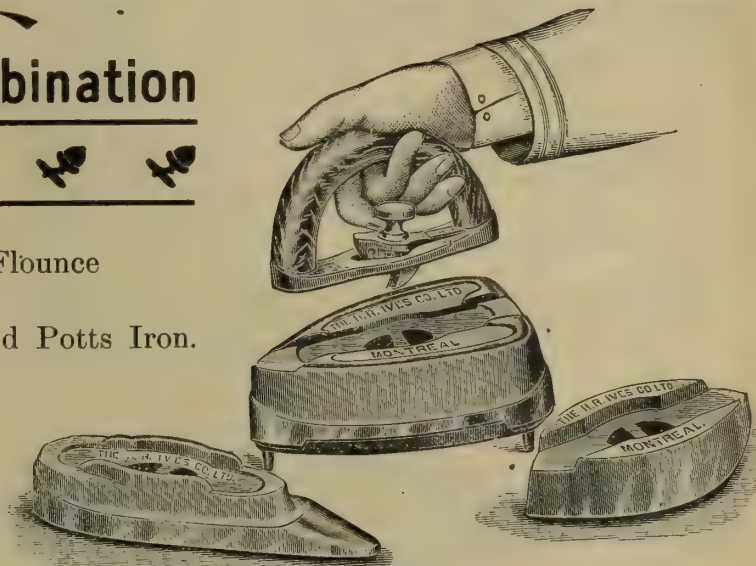
Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write to-day.

NEW Combination Set

Pressing, Flounce
and Sleeve
and Potts Iron.

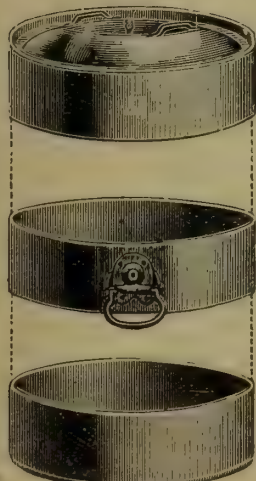


WRITE FOR PRICES

The **H. R. IVES CO., Limited**, Manufacturers, Montreal

For durability, finish and economy in making up

DAVIDSON'S Patent Broad Hoop, Heavy Roll Rim Bottom Milk Can Trimmings are unequalled.



In Complete Sets

"BROAD HOOP" Pattern Composed of the following: 1 Broad Hoop Bottom, 1 Cover, 1 Centre Hoop 6 inches wide, 21 gauge, 1 Broad Top Hoop, 1 pair Cover Handles, 1 pair Side Handles.

Popular Features

Our Broad Hoop Bottom is built to defy hard usage and has all the advantages of a seamless bottom without the strain that spinning entails.

Bottoms can be sweated in, using little solder.

Bottoms are concave, draining to the centre, and are therefore easy to wash out, and will not corrode.

Heavy Rolled Edges makes our Patent Bottoms doubly durable and factory and wagon floor protectors.

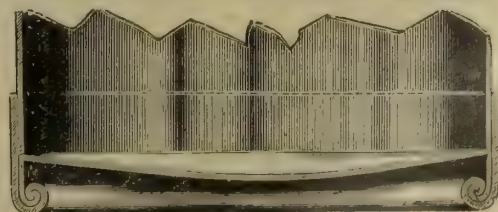
Top Bands are Shouldered and all bands have retinned edges.

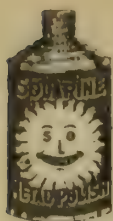
We can also supply best quality
Tinned Iron at lowest market prices.

The **Thos. Davidson Mfg. Co. Ltd.**
MONTREAL



See how the Outer Rim and Inner are rolled in and Rivetted to Bottom Hoop as well as being rolled together.





A household necessity
"SOLARINE"
 Every hardware dealer
 should sell Solarine Metal Pol-
 ish, the polish of quality.
 Ontario Agent
H. F. FALKNER,
 60 George St., TORONTO

IT BEATS ALL

This in brief is why you should handle

York Metal Polish

Liquid or Paste.

Cleans and polishes in one
 operation.

Order through your job-
 ber or direct.

Sample Free

**ANGLO-CANADIAN
 SUPPLY COMPANY,**
 29 CHURCH ST. :: TORONTO.



OAKEY'S 'WELLINGTON' KNIFE POLISH

JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and
 Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

**JOHN FORMAN, 644 Craig Street
 MONTREAL.**

DON'T BE IN A HURRY

placing your orders for the season
 of 1905 for

Tubular Lanterns

("Await The Light of Other Days.")

We shall have new goods and inter-
 esting prices to offer early in the year.

**ONTARIO LANTERN AND LAMP CO.
 HAMILTON, Limited**

WALTER GROSE, Selling Agent, MONTREAL.

STOVES AND TINWARE.

Oldest Tin Mines.

By J. C. Fuller

TIN is the rarest of the so-called common metals. The annual output of the world at present is 75,000 tons, of which 5,000 comes from Cornwall. Prior to 1875 the number of tons raised at Cornwall was about twice as large and formed about one-fourth of the world's output, but since that year there has been an enormous expansion in the production as well as in the consumption of tin. Tin is now found on almost every continent. There are large deposits in the Malay peninsula, in a few of the Pacific islands and in South America.

More than five-sixths of the output of tin is derived from secondary alluvial deposits, but all from Cornwall is from vein mining. The vein stuff is broken either by hand or in rock breakers and stamped to fine powder in stamp mills. These mills are practically large mechanically worked pestles and mortars, the stamp proper weighing from 500 to 1,000 pounds.

After the mineral has been crushed small enough to pass through a sieve with perforations one-twentieth of an inch in diameter it is carried from the stamp in suspension in water by means of a series of troughs in which the heavier mineral is collected.

This mixture then passes through a series of washes which reduces its component parts to tinstone and ascenical pyrites. Refined thus far, it is submitted to a calcining process and rewash- ed, until finally black tin containing from 60 to 65 per cent. of metal is left. The dressed ore is then smelted.

The mines are usually very hot owing to the lack of adequate ventilation, and some of them are over 400 fathoms deep and extend one or two miles under the sea. The chief source of danger is the sea water, which sometimes completely submerges the mines, often drowning the workers.

The miners of Cornwall, when work- ing on wages, make about 18 shillings a week, but the majority work on the contract system, or as you would say, by piece work, and of course their com- pensation varies. They live very com-

fortably and seem contented, being as a whole more conservative than the bet- ter classes. They do not accept Joseph Chamberlain's fiscal policy as readily as the better educated people, who are almost universally in favor of it. For some reason or other this seems to be a reversal of the ordinary status of so- ciety. Those most eager to grasp at innovations are usually the laboring classes.

Tin From Alaska.

By Joseph Hutchinson, Seattle.

THE tin industry is one of the com- ing great industries of the ex- treme Northwest. The future of the tin industry is very bright, the pros- pects for stable conditions being ex- ceedingly flattering. In view of the fact that the gold and copper industries are in many places giving signs of in- stability, for such an enormous output of gold as the Post Intelligencer quot- ed a day or two ago cannot last, the tin industry will be set against these as a constantly growing and ever develop- ing industry.

The tin so far obtained has been stream tin, or that obtained by placer mining, the tin having been washed down from the mountains. Quartz tin also occurs, and very large veins have been traced up the mountain sides, where it had been washed down into the streams. Over the entire area from Cape Prince of Wales to Port Clarence and northward many signs of large quantities of tin being present in the granite and slate beds and intrusive dikes in Silurian limestone exist. There is quartz tin from Alaska on exhibition at the St. Louis Fair, tin that has been extracted by drills run by electric power. So far no large mining machinery is established in the tin region, although electric power is used to drive the drills and other machinery employed.

The discovery of tin was very similar to the discovery of gold, tin having been found in sluice boxes, where it had been washed down from higher ground. The tin found was of dark color, and only occasionally were large bits picked up. But its value was soon ascertained, and prospectors hurried there to ascertain

THE "GOOD CHEER"

Art Base Burner

We have put on

**MORE MEN
MORE PATTERNS
MORE FLASKS**

so as to keep pace with the
unprecedented demand for
this popular Heater.

We can take care of your
orders at present, so send
them on.



There is nothing
"just as good"
made yet
—nor likely to be.

IT HAS
**NO
FAULTS**

Firepot removable
without turning a
single bolt.

Has Duplex Grate
and large ash pan.

Every stove a
Double Heater.

Has Steel Oven.

With or without
oven.

The JAMES STEWART MFG. CO., Limited
Woodstock, Ont. and Winnipeg, Man.

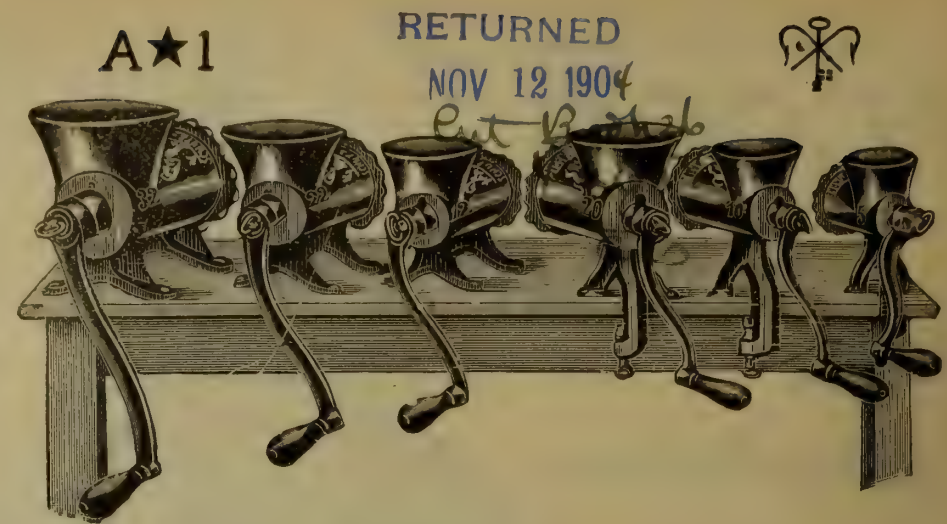
the extent of the veins and its occurrence.

All the indications of a large tin deposit have been found, and I expect soon to see a correspondingly important tin plate industry in Seattle.

Gasoline and Kerosene Oil Stoves.

A LETTER to the American Artisan from a subscriber touching on the comparative value of gasoline and kerosene oil stoves may be of interest to readers of Hardware and Metal. It is as follows:

The value of kerosene oil stoves as compared with gasoline stoves is largely a matter of opinion. The writer has had several years experience in the manufacture of all kinds of oil stoves in connection with the Electric Oil Stove Co., formerly of Homer, Mich., and I know of a good many users of the so-called blue flames that are entirely satisfied and would not exchange for any gasoline stove made, and then there are others who think the opposite. Personally we do not think there is a blue flame oil stove made on a different principle from the perforated cylinder that has been a success, and further we do not think it possible to make such a burner that will in every day use give satisfaction unless a very high grade of kerosene is used, which is not generally the case. One thing is certain, the oil stove must be kept in first-class condition, absolutely clean, etc., and have more attention paid to it in operation than a good standard make generator or process gasoline stove, or it will not give satisfaction and will be very short



TINNED AND ENAMELLED MEAT CHOPPERS.

F. W. LAMPLOUGH & CO. MONTREAL.

lived, or if it continues to burn and do business the smell would drive you out of the house. In all our experience this was the greatest trouble and cause of complaint and is what must be overcome if the stove is to be a success. Not to be free from odor when the stove is new but after it has been in general use for several weeks. When they have accomplished this they will have a stove that can compete with the standard makes of gasoline stove, and not until then.

Powerful Lantern.

E. T. Wright & Co. are pushing the sale of their celebrated searchlight lantern, just the thing that is wanted where a strong light is required to be spread over a large surface, as in livery stables, barns, saw and planing mills, warehouses, packing houses, work shops, picnic grounds, lawns, Summer resorts, etc. The lamp throws a brilliant and steady light, and will burn as well out of doors as inside, without smoking or flickering, and is not affected by wind or strong drafts.

SAVINGS BANKS

Just completed, a new line of Home Banks and in accordance with all goods of our manufacture, it is **the Best**. Very strong, durable, and beautifully finished; and fitted with inside mechanism which prevents extraction of contents without key. Size $4\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$, **Price \$1.50; Dozen lots \$15.00**. This will prove a great seller at Xmas time. Place your order now.



THE Office Specialty Mfg. Co. LIMITED

Factories, Newmarket.

New City Premises—almost ready
97-103 Wellington St. West

55 Yonge St., Toronto



Grand Idea

The Range that never fails

Many firms have been manufacturing ranges for many years, but few, if any, have produced a cooking apparatus which can compare with our Grand Idea, either as to finish, construction, durability, or efficiency.

Wherever good cooking is done, you will find the Grand Idea Range. Dealers and customers alike are unanimous in their verdict of, "It's Canada's Best Range."

The Grand Idea Range combines all the good points of the best ranges and several not to be found in any other make.

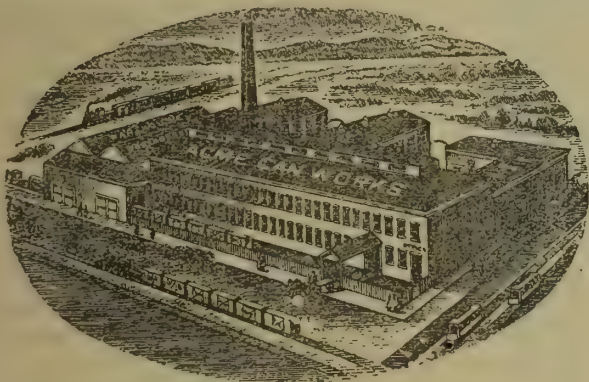
The Grand Idea Range is made in Canada, of Canadian materials, by Canadian workmen.

Keep your money in Canada—You may get some of it back again.

GUELPH FOUNDRY CO., LIMITED
GUELPH, Ont.

WESTERN REPRESENTATIVES—

MESSRS. E. G. LOW & CO., Market St., Winnipeg



When in Need of Cans, Serve Your
Best Interests and Consult Us.

Acme Can Works

make the largest assortment of any factory in America of
TIN CANS by the latest up-to date automatic machinery.

We are the **only** makers in Canada of
KEY-OPENING MEAT CANS, POULTRY CANS.

They are our specialties.

Manufacturers for Canada of

Jewett's Self-Heating Can.

We solicit inquiries for prices on

Baking Powder, Oil, Syrup, Lye, Paint, Varnish, Condensed Milk, Poultry, Fruit, Vegetable	}	Cans	}	Lard, Syrup, Butter	}	Pails
--	---	------	---	---------------------------	---	-------

ACME CAN WORKS

Ontario Street East, - - MONTREAL, P.Q.



You will
do
well

to write us for
fuller particulars concerning

The Empire Queen Range.

It embodies every good feature known in Stove Manufacture, and combines simplicity with perfection of action.

Economy Efficiency Appearance

have been the three guiding principles in its making.

Send for Catalogue and Terms
to Agents.

The Canadian Heating & Ventilating Co.

OWEN SOUND, ONTARIO.

Limited

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE operations of the Nova Scotia Collieries during the past Summer at St. Rose, Inverness county, have been highly satisfactory. The general manager, J. A. Sands, has gone to England on matters connected with the future development of the property.

NOTES.

The Brantford Electric and Operating Co. wish to have their franchise extended for ten years; in return, they will put in a new electric light system which will cost \$15,000.

The Perth Flax and Cordage Co., of Stratford, Ont., have completed their new building and are now ready to manufacture twines, cords, fish lines, plow lines, etc.

The Ladysmith Iron Works, of Victoria, B.C., have been formed into a joint stock company and will be known as the Ladysmith Iron and Stove Works Co., Limited, with a capital of \$50,000.

The Nova Scotia Steel and Coal Co., of Sydney Mines, C.B., have since the 29th of last August a total output of 3,575 tons of pig iron to their credit, for which they will receive a bonus of \$5,362.

P. Hoek and J. Waill, members of the General Metal Products Co., of France, are interviewing the Dominion Government regarding a proposal to manufacture steel rails and other steel goods in Canada.

The erection of the power house at Wetaskiwin, Man., is nearing completion. First shipments of machinery have been made and the work is being pushed forward with the greatest possible speed.

For the first time in the history of the port of Montreal the total shipments of Canadian bituminous coal by the St. Lawrence route will this season reach close to the million and a half mark.

The shipments up to the end of October totalled 1,170,095 tons, and the different companies will be able to send their steamers up the river till the beginning of December. The total shipments for last season were 1,061,000.

The feature of the season's shipments was the replacing of the large shipments of Scotch and Welsh coal by Canadian coal.

The Rainy Lake Mfg. Co., of Fort Frances, have got their saw mill in operation and are turning out from 1,500 to 1,800 railway ties daily. They have also taken out 300,000 feet of timber for

their proposed furniture factory which will be erected a short distance east of Fort Frances.

The Imperial Steel and Wire Co., Limited, of Collingwood, expect to make a start in about ten days. Fence and nails will be their staple products; they will aim at reaching the highest standard of excellence in these lines. Manager Lindsay thinks the prospects for business very bright.

COMPANIES INCORPORATED.

Canadian Metal Co., Victoria, B.C., capital \$1,100,000.

The Gold King, Limited, Victoria, B.C., capital \$120,000.

The Vernon Hardware Co., Limited, Victoria, B.C., capital \$20,000.

The Nelson Brewing Co., Limited, Victoria, B.C., capital \$100,000.

The Northern Power and Lumber Co., Victoria, B.C., capital \$50,000.

The Eagle Mining and Development Co., Limited, Victoria, B.C., capital \$100,000.

Hallam & Wyndham, Limited, Victoria, B.C., capital \$10,000; purpose to purchase the retail business of J. D. Hallam.

The East Templeton Lumber Co., East Templeton, Que., capital \$300,000; purpose, to carry on a general lumber business. The directors are J. E. Vallillee and J. F. Orde, both of Ottawa, and R. M. Kenny, of East Templeton.

The Welsh Tanning Co., Limited, Hastings, Ont., capital \$200,000; purpose, to carry on business of tanning and dealing in hides. The directors are: H. Quigley and J. Welsh, both of Hastings and J. A. McGrail, Ottawa.

The Southeast Kootenay Coal and Petroleum Co., Limited, East Kootenay, B.C., capital \$250,000; to prospect for coal and petroleum; directors, George W. Kerr, Rossland, B.C.; William Kelly, Jr., Stewardville, Minn., and W. A. Nelson, Spokane.

Dominion Natural Gas Co., of Hamilton, capital \$500,000, to take over the business of the People's Natural Gas, Limited; directors, W. J. Aikens, H. Cockshutt, E. L. Cockshutt, J. S. Hamilton, and E. Sweet Grafton & Co., of Dundas.

The Rainy River International Telephone Co., Limited, Rainy River, Ont., capital \$50,000; purpose, to carry on the business of a land company. The directors are: D. Robertson, P. T. Roberts, and J. A. Mathieu, all of Rainy River; H. Williams, P. A. Smith, and H. J. T. Sissons, all of Fort Frances.

The new furniture factory of the Collingwood Furniture Co., Limited, at Collingwood, is now in operation. The principal lines that are being turned out are furniture in suites, sideboards and tables. When the factory is in complete running order the company expect to employ about 60 hands. They are very well satisfied with the start they have made and report the prospects as excellent, especially in the Northwest.

In the month of October only ninety-seven building permits were issued in the city of Montreal, representing a value of \$238,510. These were for eighty houses, 154 dwellings, ten stores, one warehouse, one stable and eleven sheds. For alterations thirty-eight permits were issued representing a value of \$37,520, for 27 dwellings, nine stores, one warehouse, three factories, two stables and six sheds.

The annual meeting of the St. Eugene Consolidated Mining Company, Limited, was held on the 8th inst. The company's mines have been in operation since May after a suspension of two years. In this time they have mined 50,450 tons of ore, which has been converted into 10,740 tons concentrates. The financial statement for the year ending September 30th showed a cash surplus of \$131,965. The old directors were re-elected.

The Buffalo and Leamington Oil and Gas Co., Limited, with a capital stock of \$100,000, has been formed with head offices in Windsor, and has applied to the Ontario Government for a charter. The directors are Buffalo, Perth, Leamington, Pelee Island and Windsor men. Immediate preparations for the boring for oil will be commenced at Leamington, where the company has secured options on a large tract of land.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
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Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

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Counsellor at Law U.S. Supreme Court,
Registered Attorney U.S. Patent Office.

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GUN SHOP and MODEL SHOP
Warren White Sulphur Springs,
Totten P.O., Virginia.

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OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish Chemical and Drysaltery Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.

19 LUDGATE HILL LONDON, ENG.

Order a stock of

**"Windmill Best"
Galvanized Sheets**

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, Montreal

**DON'T INVITE TROUBLE**

By Buying Imitation FIRE, Water, Dust and Air-Proof SKYLIGHTS. **BUY THE GENUINE.** Our pamphlet will tell you about "OUR IMPROVED."

Manufacturers and Contractors
of

Metal Fireproof Windows
CORRUGATED IRON

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

A. B. ORMSBY LIMITED,

Cor. Queen and George Streets,
TORONTO, ONT.



This design a guarantee of quality

WATERPROOF WRAPPING PAPER

For Express and Long Distance Packages Put up in rolls 36 in. wide, 250 and 300 yards in a roll. Clean paper on both sides—waterproof substance in the centre therefore it will not soil or stain delicate goods as ordinary waterproof paper will. Practically odorless. May be used either for case lining or wrapping packages.

CANADA PAPER CO.

SAMPLES AND PRICES WITH PLEASURE. TORONTO LIMITED MONTREAL

When the Coal Dealer Smiles

—when the kitchen range and the furnace are consuming black diamonds. Some of these black diamonds get through unconsumed. They should be sifted out with one of our

ALL-METAL ASH SIFTERS—Retail at 25c.

Metal and wire. Marvels for completeness. Marvels at the price. A dozen or two will go like hot cakes. Send in an order.

C. M. CUTTS & CO., Patentees, Toronto Junction, Ont.

**Pedlar's "Perfect" Metal Lath**

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.
24 gauge 13c. per square yard.

F.O.B., Oshawa.
(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.**

THE OFFICE END

DEVOTED TO THE
OFFICE STAFFS OF
BUSINESS
ESTABLISHMENTS

FORMING A JOINT STOCK COMPANY.

A few points of interest to the bookkeeper in changing from a partnership to a Joint Stock Company or in the Amalgamation of Industrial Concerns.

Ry H. R. W.

FROM the legal point of view, the parties applying for a charter of incorporation must be not less than three, also twenty-one years of age, and may petition the Lieutenant-Governor through the Provincial Secretary for the issue of letters patent.

The provisional directors of a company are usually the applicants for the charter, and constitute a committee, who manage the affairs of the company up to the time of the first general meeting of the shareholders, when a board of directors is elected.

A company may be incorporated under special act, such as banks or mining companies, or by letters patent under the great seal.

In case of amalgamation, the directors of the different companies may enter into a joint agreement to be executed under the corporate seal of each company, prescribing the terms, conditions, the name of the new company, the last word of which shall be the word "Limited," which must be written out in full when the word immediately preceding it is neither "Company," "Club," nor "Association," but when any of these words precede, the word "Limited" may be abbreviated, provided the letters "L" and "D" shall be the first and last letters respectively. The prefix "The" in the name of a company may be omitted where any of the three words mentioned above form part of the name. The use, or rather, misuse, of the word "Limited," has been the source of legal disputes to some extent, and it might therefore be well to call attention to the responsibilities of the directors and officials of a company in this connection. The word must be used on all the letter paper of the company, on the signs, in the advertisements, on the corporate seal, in fact, everywhere the name of the company is used.

Every company, director, manager or officer who knows of the omission of the word "Limited," or of its abbreviated form as before described, and does not comply with the provisions in regard to its use, shall incur a penalty not exceeding ten dollars for each and every offense and may be liable to a penalty of one hundred dollars for a second offense.

With their joint petition for charter the various companies shall deposit with the Provincial Secretary an original of the agreement of amalgamation, the Lieutenant-Governor in Council may then by letters patent confirm such agreement, and from the date of such confirmation the said company shall be deemed consolidated, and the new company shall possess the rights, privileges, etc., of each of the companies so consolidated.

An action pending against any one of the different companies would not abate, nor would the right of creditors be affected in any way by the amalgamation.

If the number of shareholders is less than five in any limited company for a period of six months after the number has been so reduced, every person who is a

shareholder of the company during the time that it so carries on business after such period of six months, and knows the fact, is individually liable for the payment of the debts of the company contracted during such time.

The petition for charter should set forth the objects of the amalgamating companies; should state where the head office was to be situated; the provisional directors, their addresses; the nominal and paid-up capital; the number of shares and the value of each. It must be very specific, as the charter will only be granted for the purposes enumerated in the petition, and the company has no right to go beyond that unless additional letters patent are applied for through the usual formalities.

The proposed name of the company should be as short as possible, and must not conflict with that of any known company.

The Ontario and Dominion acts differ in some respects in regard to joint stock companies. Under the Dominion act one-half the total amount of capital stock must be subscribed before applying for a charter.

Usually after the required amount has been subscribed the company commences business before disposing of the balance, but if no business should be done for three years, the charter will be forfeited.

A company is governed by the laws of the province or state which granted its charter, no matter where it is carrying on business, although a fine or tax may be imposed according to the laws of any other province in which business is being conducted.

If the company's capital has been impaired, the shareholders cannot be held liable for any of the debts of the company provided their stock has been paid up in full; if this is not the case, they are liable for the unpaid portion.

Certain books are required to be kept by law—A copy of the letters patent; a copy of the by-laws which govern the annual meeting; the number which constitutes a quorum; the time of election of directors, their qualifications; transfer of shares, etc.; the names, addresses, and calling of shareholders and the number of shares held by each, the amount paid and unpaid on each share; the name, address and calling of directors and date when each became, and ceased to be, a director, and a register of transfers.

These books shall during business hours be kept open for the inspection of shareholders and creditors, who may take extracts therefrom.

An annual statement must be filed on Government forms, for which a fee is charged.

It is necessary that a certain number of shareholders shall be present in order to constitute a meeting, the required number being called a quorum.

If the shareholders at the time of meeting do not exceed ten, the quorum shall be three; if they exceed ten, add to the above quorum one for every additional four up to fifty, and one for every additional ten after fifty.

A few general items of interest along this line will be given in next issue.

Criticisms and replies to articles which appear on this page may be sent to the MacLean Publishing Co., "The Office End."

CAN YOU WRITE A GOOD AD ?

We make it worth trying.

There are thousands of people in Canada who know a good advertisement when they see it. Most of them have the ability to write a good advertisement—some have the ability, but don't know it.

We want them all to enter this national contest—open free to all—to try and carry off one of the valuable prizes.

In case of a tie, the first ads. received get the prizes, so get YOUR advertisement in as soon as possible. Contest will be closed December 15th, and prizes awarded as soon after as possible.

The successful ads. will be reproduced in this journal with the names of the winners, and accompanied by a special article commenting on the entries, and enumerating the good points of the best of them.

CONDITIONS OF THE CONTEST :

Advertisements entered may be for any business the contestant may choose. Each ad. entered should be accompanied by a statement specifying what the ad. is intended to advertise, or what results it is intended to secure.

Each ad. must have been written by the contestant, either specially for this contest, or for publication in any Canadian newspaper during the preceding three months.

It shall occupy, or be intended to occupy, a space NOT LARGER than 5 inches, double column.

Illustrations may be used if necessary to illustrate the article advertised, or if thought to make the ad. more result-producing.

Consideration will be shown by the judges to the neatness of appearance of copy, the display arrangement, etc., so that every ad. should be properly laid out the same as you would send it to the newspaper for publication.

All entries will be stamped with the date received, and in case two or more ads. of equal merit are considered better than all others, the one first received will be awarded the prize. So don't delay in entering the contest.

There is no limit to the number of entries to be made by any one person, but no person can secure more than one prize.

Any further particulars may be secured on request, and all communications and entries should be addressed to

**CORRESPONDENCE DEPARTMENT
CENTRAL BUSINESS COLLEGE
YONGE AND GERRARD STS., TORONTO.**

AD-WRITING CONTEST.

OPEN FREE TO ALL !

12 PRIZES

FIRST PRIZE, 50.00. Our Complete Course of Personal Instruction in Advertising, including 30 specially printed text books, value \$50.00. Free of all cost. Awarded for the best advertisement.

SECOND PRIZE, \$25.00. Any one of the Specialized Courses of Advertising Instruction, including text books, value \$25.00, or, if desired, the Complete Course at 50% discount from regular cash price. Awarded for the second best advertisement.

THIRD PRIZE, \$10.00. The Complete Course, or any one of the Specialized Courses, at 25% discount from regular cash prices, value about \$10.00. Awarded for the third best advertisement.

FIVE SPECIAL CONSOLATION PRIZES, allowing the winners a special discount of 10% on regular cash prices of any course. Awarded for the five next best advertisements.

FOUR MORE CONSOLATION PRIZES, of one year's paid-up subscription to The Canadian Grocer, Hardware and Metal, or The Dry Goods Review. Awarded for the four next best advertisements.

All prizes awarded in the order of merit according to the decision of the judges, which decision is final.

We have special literature concerning the courses offered as prizes which will be gladly sent on request.

Trade With England

Every Canadian who wishes to trade successfully with the Old Country should read

"Commercial Intelligence"

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$4.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

Who's Your Printer ?

We would like to be. If we were we could save you money. Just let us estimate on your next order and see for yourself.

G. A. WEESE & SON, 44 Yonge Street, TORONTO.

ALCOHOLISM

The best treatment for all persons afflicted with the disease of drunkenness is known only to Dr. MacKay. Address: City Hall, Montreal, Que. Absolutely private treatment.

Simplicity

is one of our strong points. Only those who have used our system can testify to its simplicity. Any one can be a book-keeper.

Write for our free illustrated catalogue.

THE
Briggs Ledger System Co.
Limited
75 York St., - - - Toronto, Can.

Safes and Vault Doors

GUARANTEED FIRE AND BURGLAR PROOF.

"THE WINNIPEG SAFE"

That's "OURS."

We are the sole distributing agents in Canada for the famous

DIEBOLD SAFES and VAULT DOORS

AGENTS WANTED FOR OUR SMALL HOUSEHOLD SAFES.

Winnipeg Safe Works

Office and Salesroom—62½ Princess St.,

'Phone 3006.

WINNIPEG, Man.

CHARTERED ACCOUNTANTS' STUDENTS' ASSOCIATION.

THE annual meeting of this organization was held at the offices of the Institute of Chartered Accountants of Ontario, 27 Wellington street east, Toronto, on Monday evening, October 3, at 8 o'clock, Mr. A. G. Ross, president, in the chair.

The following officers were elected for the ensuing year: W. T. Kernahan, C.A., hon. president; F. H. MacPherson, F.C.A., hon. vice-president; A. F. Park, president; G. M. Begg, vice-president; Howard R. Wellington, secretary-treasurer; A. L. C. O'Brien and A. G. Ross, executive committee; G. Noble, librarian.

The report of the retiring president evidenced a most satisfactory condition of affairs and showed that the efforts of the Association to raise the standard of efficiency among the more advanced office men in Toronto had been highly successful.

...

Wealth is not acquired by speculation and splendid enterprises, but by daily practice of industry, frugality, and economy. He who relies upon these means will rarely be found destitute.—Success.

...

THE VALUE OF SYSTEM.

THE motto for every successful enterprise to-day should be, and is, to a great extent, "Be Progressive," or, in other words, "keep up with the times in which you live."

The tendency, however, with concerns who have been in business for a number of years, and who are also doing an immense volume of trade, is to stubbornly adhere to the old methods which have been in vogue for the past 50 years, contending that as a certain amount of success has attended their efforts so far, no change should be made. Especially is this the case in regard to office systems.

By adopting an up-to-date system and arranging the accounts in a systematic manner, statistics may be obtained in regard to the business which are simply invaluable to every progressive business man; excessive expenses in certain departments or branches, small profits on certain lines of goods, heavy purchasing, slow sales, may be instantly localized by a systematic arrangement of accounts and records.

There is, of course, in some instances, a possibility of "too much system," but with reasonable care and common sense this may be avoided.

Every new system which is put upon the market should not be adopted, as, in some cases, it will necessitate increasing rather than decreasing the staff of an office, but there are, without a doubt, systems which will produce far more satisfactory results at a greatly reduced cost than the methods now employed by a number of our leading commercial houses.

Conditions have changed wonderfully within the last few years, and office methods and systems must change accordingly to keep up with the new condition of affairs, although it is quite natural for the office man who has been running in a rut for so many years to be prejudiced against anything new along this line.

There are retail merchants running monthly accounts with customers right in our large cities to-day who rare-

ly furnish a bill of goods with a purchase. What satisfaction is there for the customer to have a large itemized bill rendered irregularly, sometimes a month after the goods were bought, with nothing in the way of a delivery slip to check it with?

Suppose the wholesale merchant sent a lot of goods without an invoice. What would the retail merchant say?

Don't use a scrap of paper to take an order on; it does not pay. You will probably lose the memo. of your order and perhaps a customer also.

The cost of duplicate cash sale and charge books is so small that every dealer should use them, and it would be much more satisfactory, both to the dealer and customer.

Don't be too severe on "New Systems," as they are called; each system has been specially adapted to some business to reduce expense and labor, although possibly not suitable for your own peculiar business.

When your attention is called to an error in your work—when it is suggested that you might improve along a certain line of work—when you are advised to do a thing in a different manner from that to which you have been accustomed—don't flare up or go around all day with a long face; it is for your own good. Rather benefit by the suggestions; guard against such errors in future; strive to improve.

...

From Bradstreet's:—"Between capital and credit there is always a relative proportion. Capital is the foundation, while character, ability and circumstance govern, qualify and create credit."

...

BUSINESS LOGIC.

A retailer has the following in a neatly printed window card:

I believe in Advertising when I am busy so that I will get continuous orders when business is slack.

...

SELF-RELIANCE A GOOD TEACHER.

WE often find that boys who have educated themselves in the country, almost without schooling or teachers, make the most vigorous thinkers. They may not be quite as polished or cultivated, in some ways, but they have something better than polish, and that is mental vigor, originality of method, and independence. They do not lean upon their schooling, or depend upon their diplomas; necessity has been their teacher, and they have been forced to act for themselves and be practical; they know little of theories, but they know what will work. They have gained power by solving their own problems. Such self-educated, self-made men carry weight in their communities because they are men of power and think vigorously and strongly; they have learned to concentrate the mind.

Self-help is the only help that will make strong, vigorous lives. Self-reliance is a great educator and early

poverty is a good teacher. Necessity has ever been the priceless spur which has called man out of himself and spurred him on to his goal.

Grit is more than a match for almost any handicap. It overcomes obstacles and abolishes difficulties. It is the man who makes an opportunity and does not wait for it—the man who helps himself and does not wait to be helped,—that makes the strong thinker and vigorous operator.

It is he who dares to be himself and to work by his own programme, without imitating others, who wins.

* * *

Remember to show courtesy to others, not because they are gentlemen, but because you are one.

HOTEL DIRECTORY.

NEIL McCARNEY, PROP. W. C. McCARNEY, MANAGER.
THE PROVINCIAL
 LEADING COMMERCIAL HOTEL. GANANOQUE, ONT.
 Located in Heart of Business Section. Ten First-class Sample Rooms.

HOTEL GRAND
 O. F. BAKER, PROP. GALT, ONT.
 First-class accommodation for Commercial Men.

THE BELL TELEPHONE CO.

of Canada, Limited

has extended its

Long Distance Service

From

BRANTFORD

to

MOHAWK, OAKLAND and SCOTLAND

Rates may be obtained from any of the Long Distance Toll Stations of the company.

Special Advertising Rates have been arranged for space in "The Office," and will be gladly quoted on request.

This list is for the purpose of placing retailers, manufacturers' jobbers and other readers in touch with reliable and competent accountants and auditors whose services are so frequently required for such purposes as opening books,

Leading Canadian Accountants and Auditors

adjusting and auditing accounts, arranging partnerships or organizing joint stock companies, devising special office systems, making collections and investigations, handling estates, making valuations, etc.

DAVID HOSKINS, F.C.A.
 Chartered Accountant, Auditor, Financial Valuator.
 27 Wellington Street East, Toronto, Canada.

This Space \$15 a Year.

JENKINS & HARDY,
 Assignees, Chartered Accountants,
 Estate and Fire Insurance Agents.
 15½ Toronto Street. Toronto.
 485 Temple Building, Montreal.
 100 William Street, New York.

This list is for the purpose of placing manufacturers, wholesale and retail merchants and other readers throughout Canada, and firms abroad doing business in Canada, in touch with the legal profession throughout the Dominion, for the collection of accounts, legal representation,

LEGAL CARDS.

organization of companies, the arrangement or dissolution of partnerships, or assignments, as well as all other matters of a legal nature.

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COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt.	Less than this
quantity 4c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorators' Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt.	\$4 25	\$4 50
Genuine, 100 lb. kegs.	4 75	
No. 1, 560 lb. casks, per cwt.	4 00	
No. 1, 100 lb. kegs, per cwt.	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

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In 1, ½ and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
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The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
Thistle	1 00
Outside, bbls	0 55
Island City House Paint	1 25
"Floor"	1 25
Sterling House Paint	1 20
"Floor"	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose.	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
"No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
"orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
"No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	2 75
Granitine floor finish, per gal.	1 20	
Maple Leaf coach enamels; size 1,	\$1.20	
size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, assorted		
case, from	to 1 gal., \$2.50.	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatin	0 18	0 20
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner	0 12	0 16
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
American \$2.00 per 1000.	
C. B. Caps American, \$2.60 per 1000.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, list net Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American	
10 per cent. advance on list.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

Best thick brown or grey felt wads, in	per lb.
1-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8	0 90
5 and 6	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8	1 65
5 and 6	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.

Woodyatt Hudson, per doz., net	4 50
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AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.	
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AXES.

Chopping Axes		
Single bit, per doz.	7 00	10 00
Double bit, "	10 00	18 00
Bench Axes, 40 per cent.		
Broad Axes, 25 per cent.		
Hunters' Axes	5 50	6 00
Boys' Axes	6 25	7 00
Splitting Axes	7 00	12 00
Handled Axes	10 00	

AMERICAN AXE AND TOOL CO.

Red Ridge, boys', handled	5 75
hunters	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.

Ordinary, per gross	6 00	7 00
Best quality	10 00	12 00

BELLS.

Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	

American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.

Gonga, Sargent's	5 50	8 00
"Peterboro", discount 50 and 10		
per cent. off new list.		

Farm.

American, each	1 25.	3 00
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House.

American, per lb.	0 35	0 40
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BELLOWS.

Hand, per doz.	3 35	4 75
Moulders, per doz.	7 50	10 00
Blacksmiths', discount 40 per cent.		

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	

Agricultural, not wider than 4 in., 75 per cent.	
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Auger.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.

Gilmour's, 47½ per cent.	
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Expansive.

Clark's, per doz	0 65	0 90
Diamond, Shell, per doz.	1 00	1 50
Nail and Spike, per gross	2 25	5 20

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½	0 12
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BOLTS AND NUTS

Carriage Bolts, common (\$1 list)	Per cent.
" 3-16 and ½	60 and 10
" 5-16 and ½	55 and 5
" 7-16 and up	55 and 5
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

BOOT CALKS.

Small and medium, ball	per M. 4 25
Small heel	4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.	
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BUTCHERS' CLEAVERS.

German	per doz.	6 00	9 00
American	"	12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60	6 30
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BUILDING PAPER, ETC.

BUILDING PAPER, ETC		
Tarred Felt, per 100 lb.		1 85
Ready roofing, 2-ply, not under 45 lb.		
per roll		0 90
Ready roofing, 3-ply, not under 65 lb.		
per roll		1 15
Carpet Felt		per 45 00
Heavy Straw Sheathing		per ton 35 00
Dry Sheathing	per roll, 400 sq. ft.	0 40
Tar	" 400 "	0 50
Dry Fibre	" 400 "	0 55
Tarred Fibre	" 400 "	0 65
O. K. & I. X. L.	" 400 "	0 70
Resin-sized	" 400 "	0 45
Oiled Sheathing	" 600 "	1 00
Oiled	" 400 "	0 70
Roof Coating, in barrels	per gal.	0 17
Roof	small packages	0 25
Refined Tar	per barrel	5 00
Coal Tar		4 00
Coal Tar, less than barrels	per gal.	0 15
Roofing Pitch	per 100 lb.	1 00

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.9	or 2-inch
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BUTTS.

Wrought Brass, net revised list.	
Cast Iron	
Loose Pin, discount 60 per cent.	

Wrought Steel.

Fast Joint, discount 70 to 70 and 5 per cent.	
Loose Pin, discount 70 to 70 and 5 per cent.	

CARPET STRETCHERS.

American	per doz.	1 00	1 50
Bullard's	"		6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50	8 50
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CHALK.

NOB. 32 and 33 per gross	7 50	• 50
CHALK.		
White lump	per cwt.	0 60
Red	"	0 05
Crayon	per gross	0 14

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,	per doz \$4 00
" " " 25c. pkgs., "	2 00
" " " 10c. "	75
" " " 25-lb. pail, each	1 20
Poultry Foods, 25c. packages	1 20
Cough Powders, per doz.	1 21
Worm	1 25
International Stock Foods, \$1 packages,	per doz. 8 00
per doz.	2 75
International Stock Foods, per pail	10 50
" " " per lb.	10 50
" Poultry \$1 pkgs. per doz.	8 00
" Worm Powders, 50c. pkgs.	4 00
" Pine Healing Oil, per doz	8 00
" Pheno-Chloro-Sipkgs. per doz	8 00
" Hoof Ointment	8 00
" Compound Absorbent	8 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz	

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Davis Clothes Reels, dis. 40 per cent.	
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CONDUCTOR PIPE.			GAUGES.			Clothes line, No. 61..			Cabinet.		
Plain or Corrugated.			Marking, Mortise, Etc.			Harnes.....			Eagle, discount 30 per cent.		
1-inch.....per 100 feet			Stanley's, discount 50 to 55 per cent.			Hat and coat.....per gro.			Padlocks.		
2 "....." " "			Wire Gauges.			Chandelier.....per doz.			English and Am.....per doz.		
3 "....." " "			Winn's, Nos. 26 to 33.....each			Wrought Iron.			Eagle, discount 20 to 25 per cent.		
4 "....." " "			GILLET'S POWDERED LYE.			Wrought hooks and staples			MACHINE SCREWS.		
5 "....." " "			1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.			Hat and coat, discount 60 per cent.			Iron and Brass.		
6 "....." " "			HALTERS.			Belt.....per 1,000			Flat head, discount 25 per cent.		
CRADLES, GRAIN.			Rope, 1-inch.....per gross			Screw, bright, discount 60 per cent.			Round head, discount 20 per cent.		
Canadian, discount 20 to 25 per cent.			Rope, 1 1/4-inch....." "			HORSE NAILS.			Tinmiths'.....per doz.		
CROSSCUT SAW HANDLES.			Rope, 1 1/2-inch....." "			"P.B." Brand, 55 to 60 per cent.			Carpenters' hickory, " "		
S. & D., No. 3.....per pair			Leather, 1-inch.....per doz.			"C" brand, 40, 10 and 7 1/2 per cent. off list			Lignum Vitae....." "		
S. & D., " 5....." "			Web....." "			"M" brand, 55, per cent.			Caulking, each....." "		
S. & D., " 6....." "			HAMMERS.			"Monarch," 50 and 7 1/2 per cent.			Canadian.....per doz.		
Boynton pattern....." "			Nail.			"Peerless" 50 per cent. dis.			American, discount 3 1/2 per cent.		
DOOR SPRINGS.			Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27 1/2 per cent.			HORSESHOES.			German, 15 per cen		
Torrey's Rod.....per doz.			Tack.			F.O.B. Montreal			Gem.....each		
Coll. 9 to 11 in....." "			Magnetic.....per doz.			"P.B." brand, new pattern, base.....			Discount 25 per cent.		
English....." "			Canadian.....per lb.			"M." brand, base.....			2d.....Cut.		
DRAW KNIVES.			English and Canadian, per lb.			Add 15c. Toronto, Hamilton, Guelph.			3d.....Wire.		
Coach and Wagon, discount 50 per cent.			HANDLEKS.			JAPANNED WARE.			4 and 5d.....		
Carpenters' discount 60 and 10 per cent.			Axe, 2nd growth, per doz. net			50 per cent.			6 and 7d.....		
DRILLS.			Store door.....per doz.			FICKS.			8 and 9d.....		
Hand and Breast.			Fork.			Star.....per doz.			10 and 12d.....		
Miller's Falls, per doz., net list.			C. & B., discount 40 per cent., revised list.			KEYS.			16 and 20d.....		
DRILL BITS.			Hoe.			Brass spun 7 1/2 per cent. discount off new list.			30, 40, 50 and 60d (base).....		
Morse, discount 37 1/2 to 40 per cent.			C. & B., discount 40 per cent., revised list.			Copper.....per lb.			Cut nails in carlots 5c. less.		
Standard, discount 50 and 5 to 55 per cent.			Saw.			American, 60 and 10 to 65 and 5 per cent.			Wire nails in carlots are \$2.20 (base).		
FAUCETS.			American.....per doz.			LOCK.			Steel cut nails 10c. extra.		
Common, cork-lined, discount 35 per cent.			Plane.			Lock, Canadian dis. 40 to 40 and 10 per cent.			Miscellaneous wire nails, discount 75 per cent.		
EAVEROUGHES.			Hammer and Hatchet.			Cabinet, trunk and padlock,			Coopers' nails, discount 30 per cent.		
10-inch.....per 100 ft.			Canadian, discount 40 per cent.			American.....per gross			NAIL PULLERS.		
ELBOWS (stovepipe.)			HANGERS.			Door, japanned and N.P., per doz.			German and American.....		
5 and 6-inch, common.....per doz.			Steel barn door.....			doz.....			NAIL SETS.		
7-inch....." "			Sterns, 4-inch.....			Bronze, Berlin.....per doz.			Square, round and octagon,		
Polished, 15c. per dozen extra.			5-inch.....			Bronze, Genuine.....			per gross.....		
ESCUTCHEONS.			Zenith.....			screw.....per gross			Diamond.....		
Discount 50 and 10 per cent., new list			Lane's covered—			White door knobs.....per doz.			POULTRY NETTING.		
ESCUTCHEON PINS.			No. 11, 5-foot run.....			HAY KNIVES.			2-in. Mesh, 19 w.g., dis. 60 per cent.		
Iron, discount 40 per cent.			No. 11 1/2, 10-foot run.....			Net prices.			2-in. Mesh, 16 w.g. and heavier, 50 p.c.		
FACTORY MILK CANS.			No. 12, 10-foot run.....			LAMP WICKS.			OAKUM.		
Discount off revised list, 40 per cent.			No. 14, 15-foot run.....			Discount, 60 per cent.			U. S. Navy.....per 100 lb.		
FILES AND RASPS.			Steel, covered.....			LADDERS, EXTENSION.			Plumbers....." "		
Great Western.....70 and 10 per cent.			" track, 1 x 3-16 in (100 ft).....			Wagoner Extension Ladders, dis. 40 per cent.			OTHERS.		
Arcade.....70 " "			" 1 1/2 x 3-16 in (100 ft).....			LANTERNS.			McClary's Model galvanized		
Kearney & Foot.....70 " "			HARVEST TOOLS.			Cold Blast.....per doz.			oil can, with pump, 5 gallon,		
Diaton's.....70 " "			Discount 60 per cent.			No. 3, "Wright's".....			per dozen.....		
American.....70 " "			HATCHETS.			Ordinary, with O burner.....			Davidson oilers, discount 40 per cent.		
J. Barton Smith.....70 " "			Canadian, discount 40 to 42 1/2 per cent.			Dashboard, cold blast.....			Zinc and tin, discount 50, 50 and 10 per cent.		
McClellan.....70 " "			Shingle, Red Ridge 1, per doz.....			No. 0.....			Copper.....per doz.		
Eagle.....70 " "			Barrel, Underhill.....			Japanning, 50c. per doz. extra.			Brass....." "		
Nicholson, 60 and 10 to 60, 10 and 5			HAT ENAMEL.			LEMON SQUEEZERS.			Malleable, discount 25 per cent		
Royal.....80 " "			Henderson & Potts' "Anchor Brand"			Porcelain lined.....per doz.			GALVANIZED PAIS.		
Globe.....70 to 75 " "			HINWES.			Galvanized.....			Dufferin pattern pails, discount 45 per cent		
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.			Blind, Parker's, discount 60 per cent.			King, wood.....			Flaring pattern, discount 45 per cent.		
Jowett's, English list, 25 to 27 1/2 per cent.			Heavy T and strap, 4-in., per lb.....			King, glass.....			Galvanized washtubs, discount 45 per cent		
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50			" 5-in., ".....			All glass.....			PIECED WARE.		
GLASS.			" 6-in., ".....			LAWN MOWERS FOR 1905.			Discount 40 per cent off list, June, 1899.		
Window. Box Price.			Light T and strap, discount 65 and 5 per cent.			Woodyatt, 10 1/2-in., 14-in. cut			10-qt. flaring sap buckets, discount 40 per cent		
Star			Screw hook and hinge—			9-in. " "			6, 10 and 14-qt. flaring pails dis. 40 per cent.		
D. Diamond			6 to 10 in.....per 100 lb.			Daisy, 8-in. " "			Creamer cans, discount 40 per cent.		
Size United			12 in. up.....			Philadelphia, 7 1/2-in. " "			PICKS.		
Inches.			Spring, No. 20, per gro. pairs			Woodyatt, 10 1/2-in., ball bearing			Per dozen.....		
Under 26.....			Spring, Woodyatt pattern, per gro., No. 5,			Grass Boxes.....			Picture Nails.		
26 to 40.....			\$17.50; No. 10, \$18; No. 20, \$10.80; No.			King Edw'd, 12-in., 14-in. cut			Porcelain head.....per gross		
41 to 50.....			120, \$20; No. 51, \$10; No. 50, \$27.50.			Horse Lawn Mowers, "Special,"			Brass head.....		
51 to 60.....			HOES.			Discount, 50 per cent., with freight concessions in quantity shipments.			Tin and gilt, discount 75 per cent.		
61 to 70.....			Garden, Mortar, etc., discount 60 per cent.			Maxwell & Sons:			PICTURE WIRE.		
71 to 80.....			Planter.....per doz.			10 1/2-in. high wheel.....			PINE TAR.		
81 to 85.....			Tinned cast, 35 per cent.			9-in. " "			1 pint in tins.....per gross		
86 to 90.....			HOLLOW WARE.			8-in. " "			" 1 in " "....." "		
91 to 95.....			HOOKS.			Discount 50 per cent.			PLANES.		
96 to 100.....			Cast Iron.			Canadian, 50 to 50 and 10 per cent.			Wood bench, Canadian discount 40 per cent.,		
			Bird cage.....per doz.			Russell & Erwin.....per doz.			American discount 50 per cent.		
									Wood, fancy Canadian or America 37 1/2 to 40 per cent		



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Catalog tells how to do it, at small cost.
Write for it.

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English per doz. 2 00 5 00

PLIERS AND NIPPERS.

Button's genuine, per doz. pairs, discount 37 1/2 to 40 per cent.
Button's imitation, per doz. 5 00 9 00
German 0 60 0 60

PRESSED SPIKES.

Discount 20 per cent.

PULLEYS.

Hothouse per doz. 0 55 1 00
Axle 0 22 0 33
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Canadian eastern 1 80 3 60
Canadian pitcher spout 1 40 2 10

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Saddler's per doz. 1 00 1 85
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RAKES.

Wood per doz. net 1 20 up.

RAZORS.

Elliot's 4 00 18 00
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Boker's 7 50 11 00
Wade & Butcher's 13 50 18 50
Carbo Magnetic 3 60 10 00
Griffon Barber's Favorite 10 75
Griffon No. 65 13 00
Griffon Safety Razors 13 50
Griffon Stropping Machines 13 50
Lewis Bros. "Klean Cutter" 8 50 10 50
Hindoo 10 50 14 00
Orgsteum's Swedish 3 50 10 00
Clausen, 50 and 10 per cent.
Clausen Strops, 50 and 10 per cent.

REGISTERS.

Discount 40 per cent.

RIVETS AND BURNS.

Iron Rivets, black and tinned, 60 and 10 p.
Iron Burns, discount 55 per cent.
Copper Rivets, with usual proportion burrs, 45 per cent.
Copper Burns only, discount 30 and 10 per cent.
Extras on Tinned or Coppered Rivets, 1-lb. packages 1c. per lb.; 1-lb. packages 2c. 1b.

RIVET SETS.

Canadian, discount 35 to 37 1/2 per cent.

ROPE, ETC.

Sisal 0 11
Pure Manila 0 14
"British" Manila 0 11
Cotton, 3-16 inch and larger 0 21
" 5-32 inch 0 22
" 1/2 inch 0 25
Russia Deep Sea 0 16
Jute 0 09
Lath Yarn, single 0 10
" double 0 10
Sisal bed cord, 48 feet per doz. 0 65
" 60 feet 0 80
" 72 feet 0 95

RULES.

Boxwood, discount 70 per cent.
Ivory, discount 20 to 25 per cent.

SAD IRONS.

Mrs. Potts, No. 55, polished per set 0 80
" No. 50, nickel-plated, " 0 90
Common, plain, single 4 50
" plated 5 50

SAND AND EMERY PAPER.

B. & A. sand, discount, 40 and 5 per cent
Emery, discount 40 per cent.
Curtis (Rutten's), 5 to 10 per cent. advance on list.

SAP SPOUTS.

Bronzed iron with hooks per 1,000 7 50
"Eureka" tinned steel, hooks " 8 00

SAWS.

Hand, Diaston's, discount 12 1/2 per cent
S. & D., discount 40 per cent.
Crosscut, Diaston's, per foot 0 35 0 55
S. & D., discount 35 per cent. on Nos. 2 and 3.
Hack, complete, each 0 75 2 75
" frame only, each 0 50 1 25

SASH WEIGHTS.

Sectional per 100 lb. 2 00 2 25
Solid 1 50 1 75

SASH CORD.

Per lb. 0 28 0 30

SAW SETS.

Lincoln and Whiting per doz. 4 75
Hand Sets, Perfect 4 00
X-Cut Sets, 7 50

SCALES.

Gurney Standard, 40 per cent.
Gurney Champion, 50 per cent.
Burrow, Stewart & Milne—
Imperial Standard, discount 40 per cent.
Weigh Beams, discount 35 per cent.
Champion Scales, discount 50 per cent.
Fairbanks standard, discount 35 per cent.
" Dominion, discount 55 per cent.
" Richelieu, discount 55 per cent.
Warren's new Standard, discount 40 per cent.
" Champion, discount 50 per cent.
" Weighbeams, discount 35 per cent.

SCREW DRIVERS.

Sargent's per doz. 0 65 1 00

SCREEN DOORS.

Common doors, 2 or 3 panel, walnut stained, 4-in. style per doz. 6 50
Common doors, 2 or 3 panel, yellow and green stained, 4-in. style per doz. 6 75
Common doors, 2 or 3 panel, in natural colors, oil finish per doz. 8 75
3-in. style 20c. per dozen less.

SCREWS.

Wood, F. H., bright and steel, discount 87 1/2 per cent.
Wood, R. H., bright, dis. 82 1/2 per cent.
" F. H., brass, dis. 80 per cent.
" R. H., dis. 75 per cent.
" F. H., bronze, dis. 75 per cent.
" R. H., dis. 70 per cent.
Drive Screws, dis. 87 1/2 per cent.
Bench, wood per doz. 3 25 4 00
" iron 4 25 5 00
Set, case hardened, dis. 60 per cent.
Square Cap, dis. 50 and 5 per cent.
Hexagon Cap, dis. 45 per cent.

SCYTHES.

Per doz. net 6 00 9 00

SCYTHES.

Canadian, discount 40 per cent.

SHEARS.

Clausen, nickel, discount 80 per cent.
Clausen, Japan, discount 67 1/2 per cent.
Clausen, tailors, discount 40 per cent.
Seymour's, discount 50 and 10 per cent.

SHOVELS AND SPADES.

Canadian, discount 45 per cent.

SINKS.

Castiron, 16 x 24 0 85
" 18 x 30 1 00
" 18 x 36 1 40

SNAPS.

Harness, German, discount 25 per cent.

SOLDERING IRONS.

Lock, Andrews' 4 50 11 50
1 1/2-lb. per lb. 0 37
2-lb. or over 0 34

SQUARES.

Iron, No. 492 per doz. 1 90 2 25
" No. 493 2 40 2 55
" No. 494 3 25 3 40

Steel, discount 60 and 5 to 85 per cent.
Try and Bavel, discount 50 to 52 1/2 per cent.

STAMPED WARE.

Plain, discount 75 and 12 1/2 per cent. off revised list.
Retinned, discount 75 per cent. off revised list.

STAPLES.

Galvanized 3 00
Plain 2 80
Coopers', discount 45 per cent.
Poultry netting staples, discount 40 per cent.
STOCKS AND DIES.
American discount 25 per cent.

STONE.

Washita per lb. 0 28 0 60
Hindustan 0 06 0 07
" slip 0 09 0 13
Labrador 0 15
" Axe 0 30
Arkansas 1 50
" 0 10
Turkey 5 00
Scythe per gross 3 50
Grind, 40 to 200 lb., per ton 25 00
" under 40 lb., 28 00
" 200 lb. and over 31 00

STOVEPIPES.

5 and 6 inch, per 100 lengths 7 00
7 inch 7 50

TACKS, BRADS, ETC.

Carpet tacks, blued 80 and 15
" " tinned 80 and 20
" (in kegs) 40
Cut tacks, blued, in dozens only 60
" weights 60
Swedes cut tacks, blued and tinned 80 and 10
In bulk 75
In dozens 75
Swedes, upholsterers', bulk 85, 12 1/2 and 12 1/2
" brush, blued and tinned bulk 70
Swedes, gimp, blued, tinned and japanned 75 and 12 1/2
Copper tacks 55
Copper nails 50
Trunk nails, blued 65 and 5
Trunk nails, tinned 65 and 10
Clout nails, blued 65 and 5
Chair nails 35
Patent brads 40
Fine finishing 40
Lining tacks, in papers 10
" in bulk 15
" solid heads, in bulk 15
Saddle nails, in papers 75
" in bulk 10
Tufting buttons, 22 line, in dozens only 60
Zinc glaziers' points 5
Double pointed tacks, papers 90 and 10
" bulk 40
Olinch and duck rivets 45

TAPE LINES.

English, ass skin per doz. 2 75 5 00
English, Patent Leather 5 50 9 75
Chesterman's 0 90 2 85
" steel each 0 80 8 00

TINNERS' SNIPS.

Per doz. 3 00 15 00

Clausen, discount 35 per cent.

THERMOMETERS.

Tin case and dairy, 75 to 75 and 10 per cent.

TRAPS (steel).

Game, Newhouse, discount 25 per cent.

Game, H. & N. P. S. & W., 65 per cent.

Game, steel, 72 1/2, 75 per cent.

SHOWELS.

Diaston's, discount 10 per cent.

German per doz. 4 75 6 00

S. & D., discount 35 per cent.

TWINES.

Bag, Russian per lb. 0 27

Wrapping, cotton, 3-ply 0 24

" 4-ply 0 27

Mattress per lb. 0 33 0 45

Staging 0 27 0 35

VIRRE.

Wright's 0 13 1/2
Brook's 0 12 1/2
Pipe Vise, Hinge, No. 1 3 50
" No. 2 5 50
Saw Vise 9 00

Columbia Hardware Co.
Blacksmiths' (discount) 60 per cent.
parallel (discount) 45 per cent.

ENAMELLED WARE.

White, Princes, Turquoise, Blue and White
discount 50 per cent.
Diamond, Famous, Premier, discount 50 and 10 per cent.
Granite or Pearl, Imperial, Crescent, discount 50, 10 and 10 per cent.
Premier steel ware, 40 per cent.
"Star" decorated steel and decorated white, 25 per cent.

WIRE.

Smooth Steel Wire.

No. 0-9 gauge \$2 25
10 6c. extra
11 12c. "
12 20c. "
13 30c. "
14 40c. "
15 55c. "
16 70c. "

Add 60c. for coppering and \$2 for tinning.
Extra net per 100 lb.—Oiled wire 10c.,
spring wire \$1.25, special hay baling wire 30c.,
best steel wire 75c., bright soft drawn 15c.,
charcoal (extra quality) \$1.25, packed in cases
or cases 15c., bagging and papering 10c. 50
and 100-lb. bundles 10c., in 25-lb. bundles
15c., in 5 and 10-lb. bundles 25c., in 1-lb.
hanks, 50c., in 1-lb. hanks 75c., in 1-lb.
hanks \$1.

Fine Steel Wire, discount 27 1/2 per cent.
List of extras: In 100-lb. lots: No. 17,
\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—
No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No. 24,
\$8—No. 25, \$9—No. 26, \$9.50—No. 27,
\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—
No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,
\$17. Extra net tinned wire, Nos. 17-25,
\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,
5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5
and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.
—in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—
packed in cases or cases, 15c.—bagging or
papering, 10c.

Brass wire, discount 60 per cent. off the list.
Copper wire, discount 60 per cent. net cost
30 days, f.o.b. factory.
Galvanized wire, per 100 lb.—Nos. 4 and 5,
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—No. 9, \$2.55—No. 10, \$3.20 to \$3.20
—No. 11, \$3.25 to \$3.25—No. 12, \$2.85
—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.
15, \$4.30—No. 16, \$4.30. Base sizes, Nos.
6 to 9, \$2.27 f.o.b. Cleveland. In carlots
12c. less.

Clothes Line Wire, regular 7 strand, No. 17,
\$4.65; No. 18, \$2.90; No. 19, \$2.80. Hollow
6 strand, No. 17, \$4.30; No. 18, \$2.70; No.
19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,
Toronto, Montreal.

WIRE FENCING.

Galvanized barb 2 50 3 75
Galvanized, plain twist 2 50 1 75
Galvanized barb, f.o.b. Cleveland, \$2 25 to
\$2 50 in less than carlots, and \$2 45 in car-
lots.

COILED SPRING WIRE.

High Carbon, No. 9 \$2 70
" No. 11 3 30
" No. 12 3 95

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Painted Screen, per 100 sq. ft., net.. 1 50
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Square 59 00
Eclipse, per doz 48 00
Dowdell 36 00
New Century, per doz 72 00
Connor Improved 33 00
Daisy 48 00

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Leader per doz. 30 00 33 00
Royal Canadian 24 00
Royal American 24 00
Sampson 24 00
Lightning 27 00
Terms, 4 months, or 3 per cent. 30 days.

WROUGHT IRON WARMERS.
Canadian make, discount 40 per cent

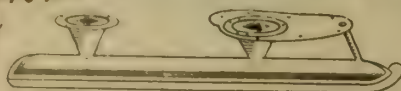
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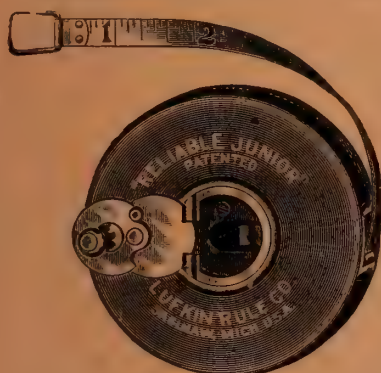
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VOL. XVI.

MONTREAL AND TORONTO, NOVEMBER 19 1904

NO. 47

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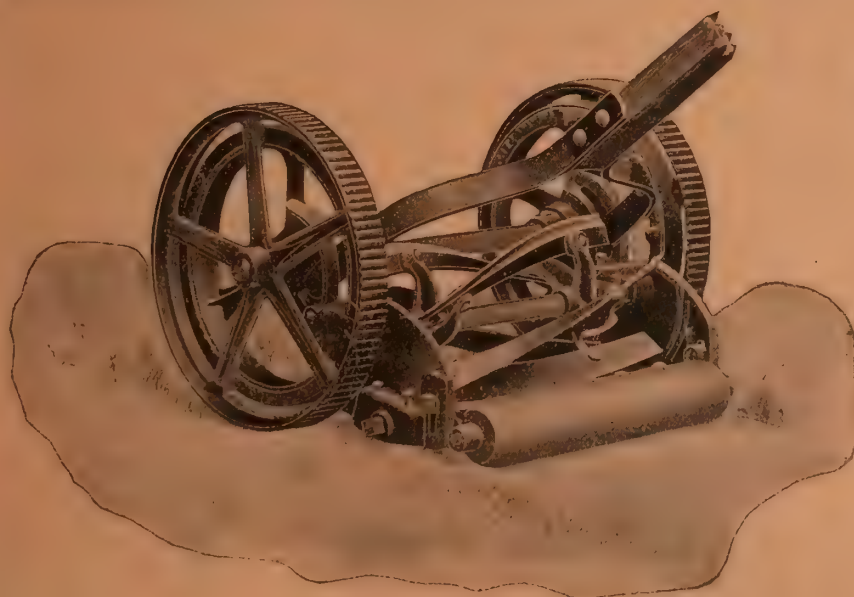
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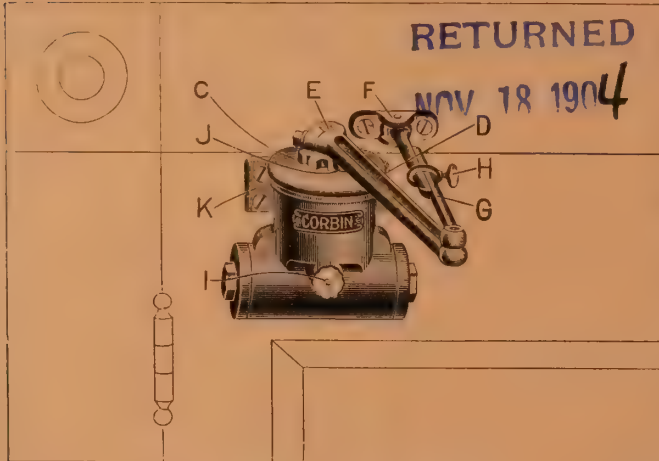
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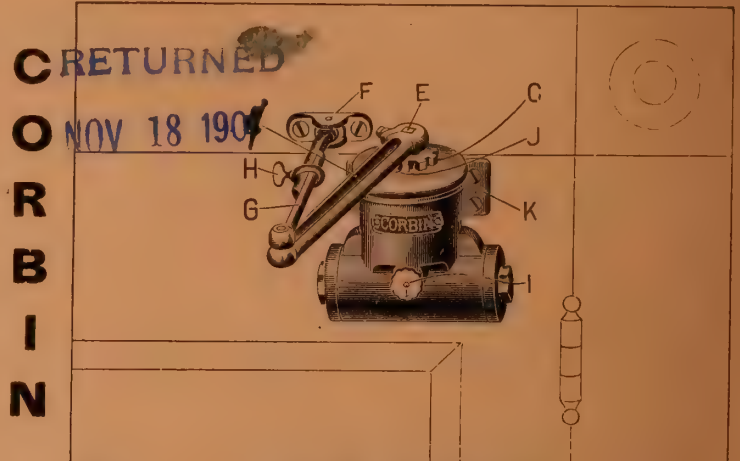
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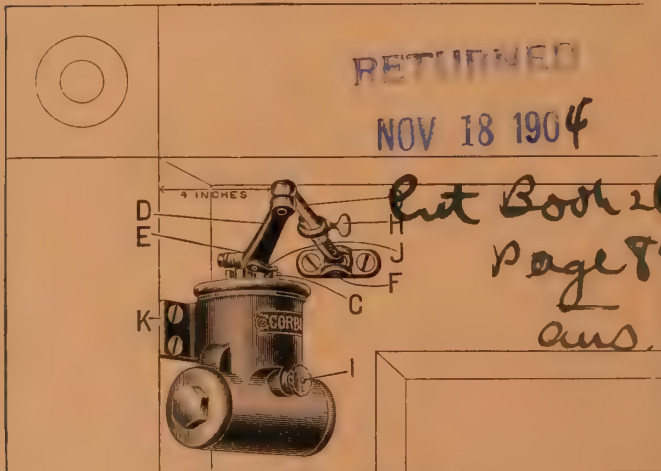
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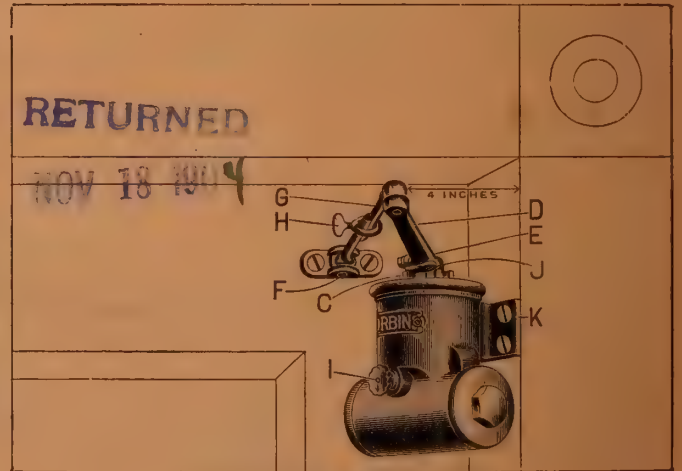
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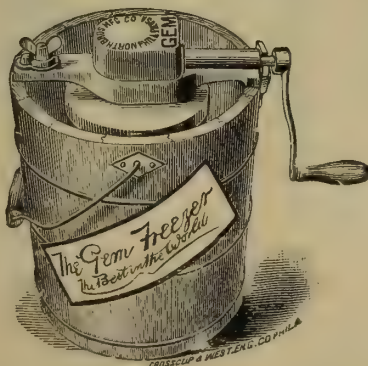
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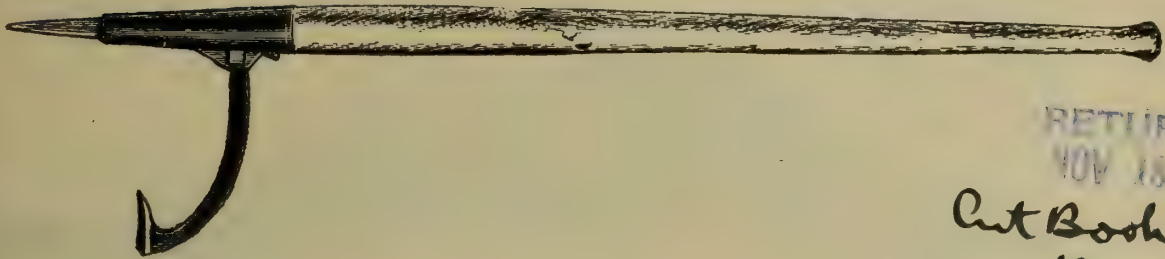
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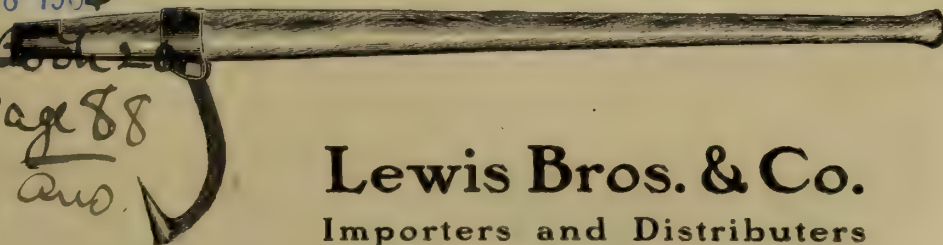
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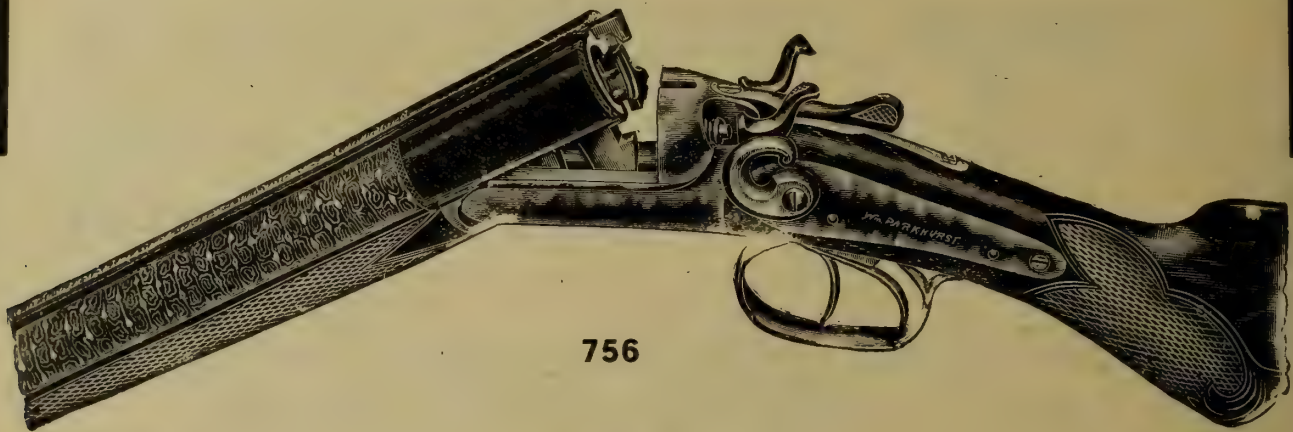
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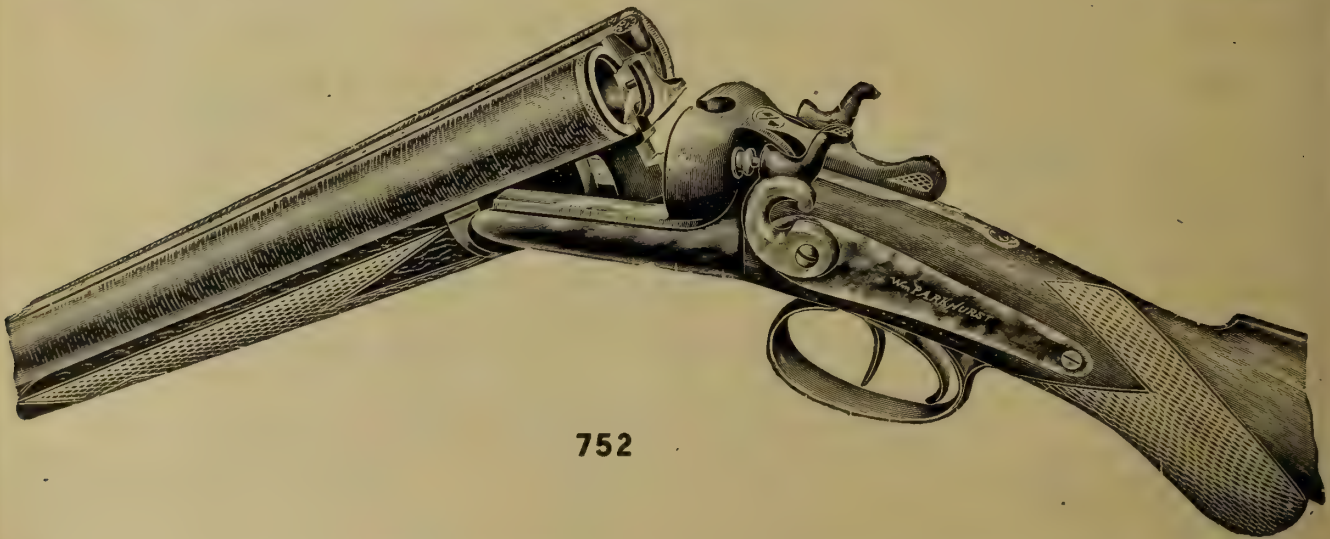
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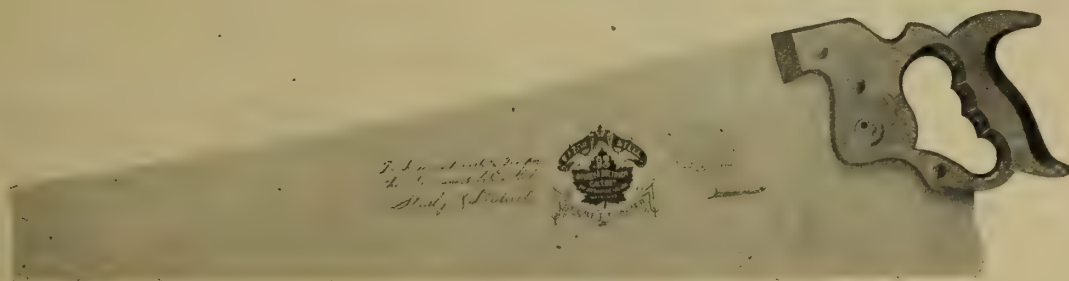
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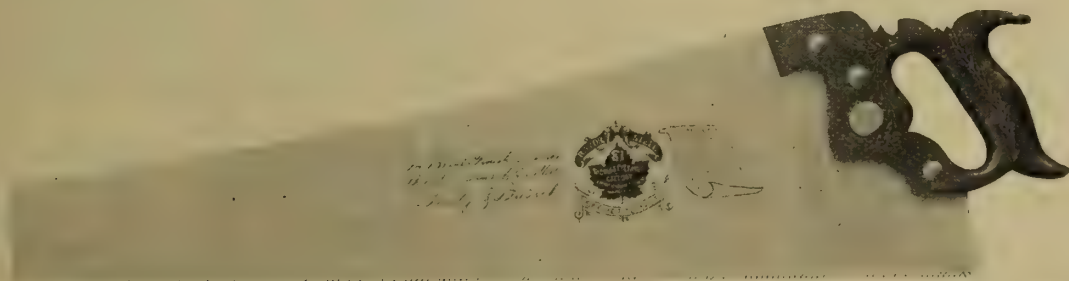
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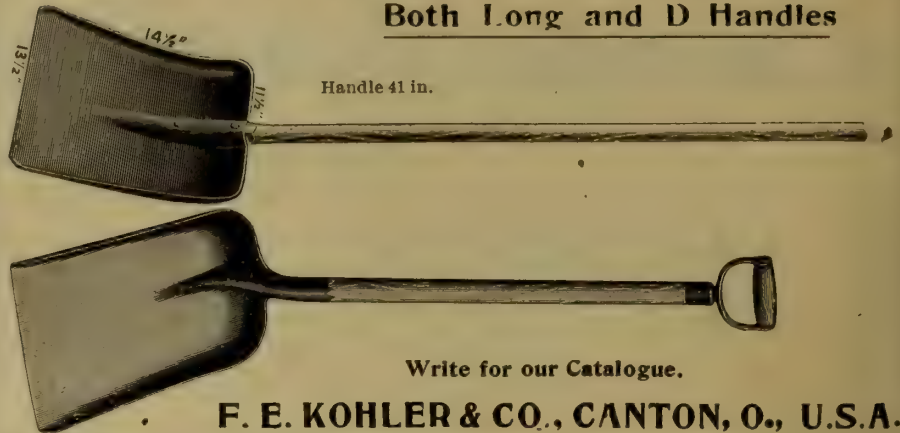
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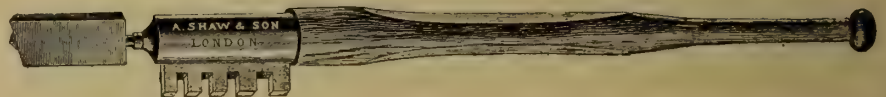
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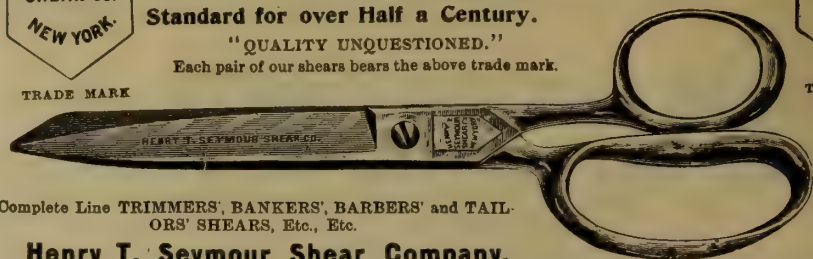
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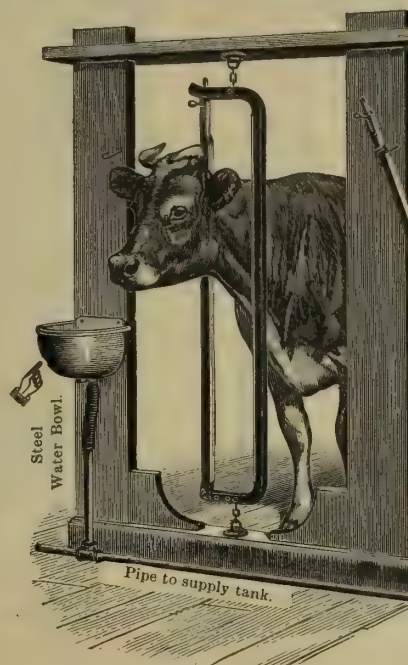
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and DOMINION (or "Short") TYPES

Oneida Community Cow Ties can be had of all
the leading jobbers. We invite correspondence
where any difficulty is experienced in obtaining
our goods.

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

NEW PATENT STABLE FIXTURES



**Galvanized
Steel Watering
Bowl
and
Steel U Bar
Stanchions.**

A profitable line for the trade.
These fixtures are easily in-
stalled, are very durable, will
not get out of order, and as
they save one-third of the
feed and are a great conve-
nience, every progressive
farmer will want them. The
demand has already been
created and the trade will
find it in their interests to
carry samples and equip
themselves to install systems.

The Metal Shingle and Siding Co.
PRESTON, ONT. LIMITED

Western Agency:
ELLIS & GROGAN,
CALGARY.

Manitoba Agency:
CLARE & BROCKEST,
WINNIPEG.

Montreal Agency:
J. B. DAGENAIS
353 ST. JAMES ST

GREENING WIRE ROPE

All kinds and sizes and for
All Purposes.

STANDARD AND LANG'S PATENT LAY

PRICES RIGHT. PROMPT SHIPMENT.

THE B. GREENING WIRE CO.
LIMITED

HAMILTON, ONT. MONTREAL, QUE

ANNEALED WIRE

FOR BALING

Hay, Straw, Pulp, Paper,
Excelsior, Rags, etc.

Steel Wire Hoops

For all Kinds of Barrels.

They are stronger, and when properly placed
and fastened by our Special Staple they are
more efficient than wooden hoops.

WRITE FOR SAMPLES AND PRICES

—TO THE—

DOMINION WIRE MFG. CO.
LIMITED
MONTREAL and TORONTO



"Pullman"
Lawn Sprinkler
IS YOUR
ORDER IN ?
Send for Folder No.14.
PULLMAN MFG. CO.
Rochester, N.Y., U.S.A.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**

Ask for our Catalogue and Quotations.

Don't Forget the Name. . .

NEWMAN'S INVINCIBLE FLOOR SPRINGS

Strong, Quick, Reliable, Effective.

Will close a door against any pressure of wind.
Far ahead of ordinary door springs, pneumatic or otherwise. Ask your wholesaler.

W. NEWMAN & SONS, Birmingham.

STEEL STAMPS

Manufacturers should stamp
their name or trade mark on
their goods.

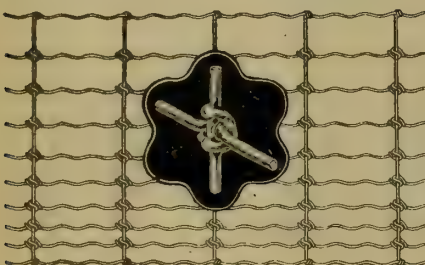
We Make the Stamps

Correspondence invited.

THE SUPERIOR MFG. CO.

58 Adelaide St. W.,

TORONTO.



IDEAL FENCING

Is Strong and Durable, because Large Gauge (No. 9) Steel Galvanized Wire is used throughout. SEE OUR EXHIBIT AT PRINCIPAL FAIRS, or write for Catalog.

Write for Catalogue.

The McGregor-Banwell Fence Co., Limited,
WALKERVILLE, ONT.

Merrick, Anderson & Co., Winnipeg, Man.

Sole agents for Man. and N.W.T.

A FULL LINE OF

Wire Springs

FOR THE

Carriage and Furniture Trade

JAS. STEELE, Guelph, Ont.

A SAMPLE ORDER SOLICITED.



Steel Frame Support.

DAVID MAXWELL & SONS

ST. MARYS, ONT., CANADA.

"Maxwell Favorite Churn."

**PATENTED
FEATURES:**

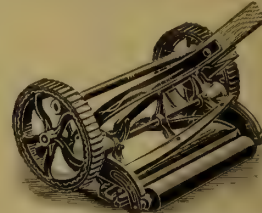
Improved Steel Stand, Roller Bearings, and Foot and Hand Lever Drive, and Detachable Driving Link. Improved for season of 1904. Steel or Wood Frame as desired.

Lawn Mowers.

High and Low Wheels, from 12 in. to 20 in. widths. Cold Rolled Steel Shafting, Crucible Steel Knives and Cutting Plate.

If your Wholesale House does not offer you these articles

SEND DIRECT TO US.



MAXWELL MOWER

8-in. Low Wheel.

Wheelbarrows.

In Four Different Sizes.

SPRINGS

FLAT-SPIRAL OR VOLUTE

INTERESTING CATALOG MAILED ON APPLICATION

THE WALLACE BARNES CO.

BRISTOL CONN.

DILLON-HINGE-STAY

Why handle Barb and Coiled Wire at no profit when you can have a fair margin on our

Dillon Fencing



Got up specially for the hardware trade.

Easily put up and at the most moderate prices.

Write for prices in car or small lots.

CAVERHILL, LEARMONT & CO.,

Montreal and Winnipeg
Eastern and Western Agents

OWEN SOUND WIRE FENCE CO., Limited

Owen Sound, Ont.

When ordering

BEST MANILA
BRITISH MANILA
or
SISAL ROPE

be sure and insist upon the dealer supplying
our make.

Consumers Cordage
Co., Limited, Montreal

Then you will receive a satisfactory
article without any additional cost.

== NOW ==
 IS THE TIME TO PLACE YOUR SORTING UP ORDERS
 FOR

POCKET
KNIVES

TRUE BRAND



CUTLERY

RAZORS
SCISSORS

BEST GOODS

QUALITY GUARANTEED

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., **Montreal**

PRICE is a good thing,—but,
QUALITY is better:

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited
 LONDON, ONT.

STEEL SNOW SHOVELS

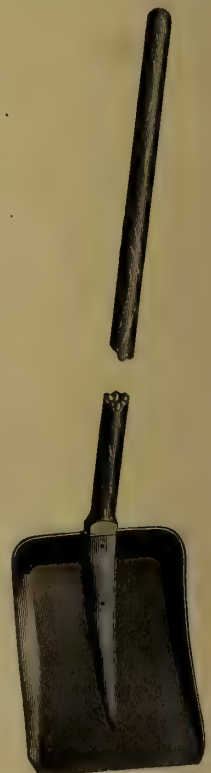
**Strong and
 Durable**

YET LOW IN PRICE

Your stock will lack one of the best selling Shovels if
 you do not have KEMP'S STEEL SNOW SHOVELS.

Finished in Japanned
or Galvanized.

KEMP MANUFACTURING CO., TORONTO, Canada



Trials and Tribulations of the Hardwareman^{*}

By U. S. Conn, Fargo.

IN a general way I presume the trials and tribulations of the hardwareman and other merchants are the same, yet there are many difficulties which we meet that are of a distinctly hardware nature. If each one present were permitted to pour out his tale of woe our stories would be about as consistent as the description of the seven blind men who went to see the elephant. One of these men came in contact with the elephant's side and thought it like a wall, another encountered a leg and thought it like a post, while another got hold of the tail and thought it like a rope.

ADVERTISING IS A HARD NUT TO CRACK.

I shall briefly mention a few of what seem to me to be the hardest nuts we have to crack. At the head of the list, although not more important than some others, is advertising. To have a good stock, carefully selected, well arranged and properly displayed, is important, but to be profitable the public must be informed that such a stock exists. How to do this is a question. Shall we advertise in the newspapers or by means of circulars, letters, calendars, in programmes, and so on through the almost unlimited number of channels so well known to all of us? Advertising should be regarded solely as a business matter, and from this standpoint the kind of advertising which brings the greatest returns on the investment should be regarded as best, and that kind of advertising which does not bring a return profit equal to the outlay certainly as a business matter should be dropped. In this last-named class is a great deal of newspaper advertising. The reason that it is of so little value does not lie with the newspapers, but with the man who writes it. To be of value the ad. must be read by the public, and to be read there must be something in it to attract attention. This is not the case with a very large percentage of the hardware ads. in the newspapers to-day. The day is past when the "Brown & Jones for Hardware and Stoves" ad. means anything. It is not read by the newspaper readers and is of no more value than a billboard along the highway.

QUALITIES OF A DESIRABLE ADVERTISEMENT.

The ad. should go into the description and value of the article enough to arouse

the desire of the reader to visit your place of business. When people visit your store then is your opportunity to do the most effective advertising, by fair dealing and courteous treatment. Writing ads. instead of being treated with indifference or no attention at all should receive the most exacting, painstaking, thoughtful attention. Were this done by every hardwareman we would soon have less occasion to hear the remark that advertising in the newspapers does not pay. We can well afford to profit from the form and manner of advertising by some of the great department stores and follow the tone and vigor of their ads. We are frequently importuned by some programme committee or society to take advertising space, which we are morally certain is a waste of money. Unless the merchant desires to make a donation in this direction he is not doing justice either to himself or to his business to take space of this kind. As a rule travelling advertisers can be put into a fake list and treated accordingly.

THEIR METHODS ARE BASED ON THE SAME IDEA.

We hear a great deal said to-day about catalogue houses and department stores. The method of each is based upon the same idea. Both inform the public in regard to their bargains. One does it by means of a catalogue and the other by the means of the articles classified and ticketed. Some hardwaremen do neither, but do business to-day as they did it twenty-five years ago. They content themselves by having their goods piled up in dignified rows behind the counter and wait for the customer to come in and ask for them.

But the department stores are educating the public to be a nation of shoppers. The shoppers desire to pass about in the store, examine the articles offered for sale and ascertain the price without causing themselves or any one else any particular inconvenience. The only way this seemingly can be done is through the bargain counter. If the hardwareman does not have a bargain counter the shopper will go where it is. We as hardwaremen may hoot at the department stores, at their prices and the kind of goods they sell, yet this does not alter the fact that they have gradually taken a large amount of trade which legitimately belongs to the hardware trade, and which could be held in a great mea-

sure by the hardware stores if some imaginary dignity were laid aside. If the hardware merchant does not have goods as cheap and as poor as the department store, he should get them and put them on the 5 and 10 cent counter and murder the prices. It is better to do this than not to sell them at all, and at the same time, by way of contrast, the merchant will have a better opportunity to sell something good.

IS LAYING THE FOUNDATION FOR THE FIVE CENT STORE.

The hardware merchant's attitude toward the bargain counter has had much to do with the development of the tinpan department of the department stores, and is now laying the foundation for the five and ten cent stores springing up all over the country. The jobbing houses have it in their power to do a great deal to assist along this line by making prices to enable the retail merchant to meet department store prices. If the jobbers do not have the inferior class of goods carried on the bargain counters, they should get them to supply the retail trade. The department stores have no difficulty in getting all of this plunder they want from such houses as Butler Bros. and others of their kind. There is but one thing to do, whether we like it or not, and that is to meet the price, and jobbers must meet the price of Butler Bros. on some of these articles.

RETAIL DEALERS NEED ASSISTANCE.

To illustrate, Butler Bros. sell a nine-inch pie plate made of coke tin for \$2.40 per gross, while the average jobber's price for nine-inch pie plates made from charcoal tin is \$3.50 per gross. The same difference exists in pot covers, tin cups and cheap dairy pans and a number of other articles. What are you going to do about it, Mr. Jobber? Going to meet it? If you do not the retail dealer must sell at a loss, be undersold or buy from Butler Bros. and others of their tribe. Retail dealers need just a little assistance along this line on some of the articles sold by catalogue houses. These houses quote some common things, the prices of which the public generally know, at about our wholesale price. What are we going to do about

^{*} Paper read before the North Dakota Retail Hardware Dealers' Association.

this? There is but one thing, and that is to meet the price.

BULLDOZING IS UNPROFITABLE.

The less we do of arguing or bulldozing or laughing the customer out of his position on the catalogue prices the better it is for us. In nine cases out of ten one can tell whether the customer is a catalogue advocate. If he is found to be, to meet the catalogue price, with freight and expense added, with as little ado as possible will do much toward establishing a customer's confidence in your prices and will go far toward making him a home customer instead of a catalogue customer. While we may have trials and tribulations in regard to disposing of goods and meeting competition, both at home and abroad, most hardwaremen have the same things in the matter of credit. As a rule every merchant, in his desire to sell, will take chances at times which he should not take. He will allow a customer whose credit might be good for a few dollars to have credit for ten times the amount without any definite understanding as to when to expect payment.

HIS OWN JUDGE AND JURY.

As a rule the matter of credit is a thing which must be settled by every man for himself. The merchant must be his own judge and jury in every case. If every customer should be required to give reference before receiving credit, and if all such things as stoves, bicycles, refrigerators and articles of corresponding value for which time is asked should be sold on a lease, we would have far less grief in the matter of collections. If merchants should do more investigating before extending credit, have a limit as to time of credit, not be so afraid to say no and follow the example of all jobbing houses by giving a discount as a premium for cash, losses would figure far less at the end of each year's business. But so long as cash and credit are all one and the same, as is now universally the case in retail business, we must expect to add a per cent. to our profit to cover losses.

THE SPECIALTY MAN.

There is just one individual to whom I desire to give my respects before closing, and that is the specialty man. While the man individually is usually all right, he is the man of one idea, he sells and thinks of one thing because he sells a great deal of this one thing; he imagines every merchant should do the same. He quotes special prices on so many gross of thermometers or so many dozens of clothes wringers, or so many gross of some new-fangled wrench or lantern. The enthusiasm of the man and the special five per cent. often leads the merchant to purchase ten times what his needs are. The pay day comes and often money which honestly belongs

to some wholesale house is taken to pay for a two years' stock of this one article. Often before the stock of the special article is sold something superior displaces it and leaves the remainder as dead property. If a thing is good a few of the articles will show it, and then more of it can be purchased. If it is of no merit it can be more economically tested by a small purchase than by a large one. As a rule I find it a good thing to be busy when the specialty man calls.

There are many things which I might say in regard to labor: incompetent, drunken tinnerns, sleepy, indifferent, disloyal clerks and so on, but I could not suggest anything better for these than to give no quarter to such. I suggest these as a few of our trials and tribulations; there are many others which I might mention. There are possibly others of more confidence which you might suggest, but these are the most prominent viewed from my side of the elephant.

ABOUT WINDMILLS.

THE utilization of wind as a motive power for pumping water from the earth is becoming more common as the capabilities of the windmill are becoming known. The idea of the average man concerning the windmill is usually only as a pump to supply water. This was true ten years ago, but it is not to-day. Now the windmill is used for everything that a small power engine might be asked to do. It pumps water for cattle on the ranches of Texas; it helps irrigate Nebraska, Arizona, New Mexico and other States with arid sections; it waters ancient villages of Palestine and Syria; pumps water for the sheep of Australia; helps alleviate famines in India, and in the crowded tenement parts of eastern cities whirls on top of grimy buildings and draws water from far down in the earth into a steel tank on the roof.

The windmill drives farm machinery, cuts corn and fodder, churns butter, runs dynamos in small towns, and often forms the "water works" of a country village.

In the factories within the limits of Chicago and its vicinity alone are produced annually 75,000 to 100,000 windmills. This is practically the production of the United States.

Netherlands, the home of the ancient windmill of the cloth arms, is succumbing to the attacks of the modern product. Turks and Greeks preparing the ground for planting with the pointed stick, have learned that a small wind-

mill and pump will bring water from the ground as well and much quicker than the ancient bucket and pole. The Egyptian plowing along the Nile with a camel team waters his beasts of burden and cattle with water drawn by a windmill.

The business of placing mills in the countries where it is a stranger is chiefly in the hands of foreign jobbers. Most of those sold for Africa go through the hands of agents in Paris. Through her African possessions France controls a great share of trade in these places.

In England the selling of windmills is controlled by branch houses of American firms. The English farmer is one of the hardest in the world to educate up to the windmill. It is an innovation in a land where hand pump and bucket have served for centuries, and the Briton is slow to adopt innovations. But brisk salesmen are breaking down the opposition, and one Chicago house ships each month forty carloads of mills and towers to England.

But America is the land of the windmill. Nowhere are so many mills to be seen and nowhere is it seen used to advantage in so many ways. The windmill is something that the American farmer, never content with obsolete methods, wanted, and he got it. Now he would not know what to do without it; it is an integral part of American agricultural life.

Near Canning, Texas, is one ranch which has five hundred windmills at intervals over its range. The pump of each mill is connected by pipes to water troughs set around it. The mill is going constantly, day after day, the year round. The troughs are thus kept full of water and the cattle are never forced to go long distances to drink. In this manner many ranges which hitherto had been a waste because of lack of water are made valuable.

Many of the smaller ranches in Texas have one hundred to three hundred and

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited.
HAMILTON, ONT.

fifty mills continually pumping water. The extensive introduction of the wind-mill in cattle raising has resulted in making the cowpuncher of to-day a mechanic as well as a cattleman. He is as much a pump rider as a range rider. On one side of his saddle he carries an oil can, on the other a tool kit. His work is to ride from mill to mill and see that all are in running order.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

A Snow Shoe Catalogue.

FROTHINGHAM & WORKMAN, wholesale hardware dealers, Montreal, are just sending out what is probably the first snow shoe catalogue ever issued in Canada. The folder includes ninety photographic illustrations showing the various patterns offered, together with prices and other information. As this catalogue embraces the chief designs in snow shoes it should be an excellent one to have around the store. It will be sent to anyone mentioning **Hardware and Metal** on request.

Aluminum Ware.

The Canadian Aluminum Works, Limited, 13 St. John street, Montreal, have issued a comprehensive catalogue giving full information concerning the aluminum goods they are manufacturers of. In the preface the good points of aluminum are explained. The illustrations include chafing dishes, kettles, pans, pots, measures, funnels, cuspidors, lamp shades, tea sets, jugs, tableware, kitchenware of all kinds, also trays, combs and camping outfits. A large part of the catalogue is devoted to cast goods such as kettles, saucepans, griddles, knives, forks and spoons, door and drawer pulls, etc. At the back some pages are devoted to illustrations of door plates, signs, bread checks, reflectors, etc. Altogether the work is one that gives a full insight into the development of the aluminum industry and should be in the possession of all retailers. Mention this paper.

Facts About the "Comet."

Alex. Gibb, Montreal, agent for W. Gilbertson & Co., Limited, Poutardawe, South Wales, is sending out a circular giving facts about "Comet" galvanized sheets. The circular states that these

There's
Money
In It.

**GOOD
TO
SELL**

**GOOD
TO
USE**

There's money in selling **Sherwin-Williams Aluminum Paint**. It is one of the best paint specialties S. W. P. Agents can place on their shelves. Gives satisfaction to the buyer—makes him think of The Sherwin-Williams name and The Sherwin-Williams agent every time he wants paint of any kind.

S-W. Aluminum Paint is so far superior to other products of similar nature that it stands practically in a field by itself. It is entirely free from the offensive banana-like odor common to other brands. Has greatest covering capacity—one coat covering a black metal surface without leaving streaks. Is very durable—does not blister, scale or crack.

Let us tell you more about it. Write today.

THE SHERWIN-WILLIAMS CO.
PAINT AND VARNISH MAKERS

Canadian Headquarters and Plant: 639 Centre St., Montreal.
Warehouses: 86 York St., Toronto; 147 Bannatyne St., East, Winnipeg, Man.

sheets have been on the Canadian market for eight years, the sales steadily increasing each year. Each sheet is patent flattened, guaranteed by the makers uniform in weight and in addition is soft, smooth and well galvanized.

Wood's Elevators and Ice Tools.

The 1904-05 catalogue of Wm. T. Wood & Co., makers of ice machinery and ice tools, Arlington, Mass., is a very complete and therefore useful one. It is well illustrated.

The first part of the catalogue is devoted to elevators, and among those illustrated and described are side feed elevators, where the blocks of ice float over the side of the water box or outer apron, the undershot elevator, where the ice blocks float under the water-wheel shaft; the overshot elevators, where the ice blocks float over the water wheel shaft; endless chain perpendicular elevator, which is useful

where the ice-house is filled from cars, wagons, etc. The next portion of the catalogue is devoted to conveyors, ice-breakers, lowering machines (the endless chain variety), electric motors, plans for ice houses. The last portion is devoted to ice tools of different kinds including ice saws, both horse power and hand, ice plows, snow scrapers, grapples, chisels, bars, hooks, tongs, axes, and ice scales.

Peerless Iceland Freezers.

The Dana Mfg. Co., Cincinnati, are sending out an attractive little catalogue descriptive of their Peerless Iceland Freezers, their Polar Freezers, and their Frezo Freezers. The advantages claimed for the Peerless are that it has very few parts and only one motion. It is claimed for it that it will freeze cream in three minutes, the quick freezing being accounted for by the peculiar construction of the dasher and the way it

handles the cream set in motion by the revolving can. The dasher has two rows of leaves, screw-like in form, on opposite sides of the stem. At right angles to them are arms carrying two hardwood scrapers. All the vital parts of the freezer which come in contact with the cream are plated with pure tin. The gears for transmitting the motion are not on the can but in a gear frame on the crank. These freezers can be fitted with fly wheel if desired. The other two styles of freezers are very similar to the Peerless.

Technical Book Reviews

Readers of *HARDWARE AND METAL* can secure any of the books referred to below at publishers' prices by writing to Book Department, *HARDWARE AND METAL*, Toronto.

Turning and Boring Tapers. The first of a series of practical papers published by the Derry-Collard Co., New York, by Fred H. Colvin; illustrated, price 25c.

This paper is a practical treatise on tapers, and their turning and boring. Taper turning with an ordinary rest is first treated, then taper turning with the compound rest and finally turning by means of taper turning attachments on the lathe. Then the boring of the taper is considered.

The paper is written in a simple and practical style.

* * *

The Drafting of Cams. Second of the aforementioned series of practical papers, published by the Derry-Collard Co., New York; by Louis Rouillon; illustrated; price 25c.

The problem of converting circular motion into motion of translation is often a puzzling one. This paper goes into the designing and construction of cams for this purpose. In the first section the general use, advantages and disadvantages of cam motion are treated, together with a practical illustration of the method followed in the laying out of cams where the line of action of the follower passes through the centre of the cam shaft, a good example of which is the heart-shaped cam. The second section deals with the laying out of cams whose lines of action are not central. The last section deals with the designing of a belt shifter, being one of a

A Triple Alliance

insuring

Iver Johnson

supremacy



Genius

Quality

Enterprise

Mechanical Genius contrived the famous safety lever which makes it safe to hammer the hammer of an **IVER JOHNSON** Revolver.

Quality has always safeguarded the good name that **IVER JOHNSON** products have continuously enjoyed.

Enterprise has found channels for a wide distribution of **IVER JOHNSON** revolvers, guns, and bicycles. They are widely advertised, and leading merchants throughout the world sell them.

SEND FOR LITERATURE.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

series of problems in machine design given at Cornell University.

* * *

Commutator Construction. Third of the series of practical papers published by the Derry-Collard Co., New York; by Wm. Baxter, Jr.; illustrated; price 25c.

Theoretically the construction of a commutator is a simple matter, but practically more difficulties present themselves because of the necessity for the complete insulation of the segments from one another. There are two sections in the paper, one devoted to the general description of the commutator, its use and different forms of construction, and the other to the repairing of commutators.

* * *

Threads and Thread Cutting. Fourth of the series of practical papers published by the Derry-Collard Co., New York; by Colvin and Stabel; illustrated; price 25c.

One of the most interesting operations in the machine shop is the cutting of threads. The first section of this paper

deals with the different kinds of threads and their use. The second section deals with internal threads, the third with multiple threads, the fourth with tool posts, the fifth with the cutting of threads, and the sixth with the cutting of threads on a milling machine.

A VALUABLE REPORT.

A word of praise on the excellent work of the Canadian Commission appointed to investigate the different electro-thermic processes for the smelting of iron ores and the making of steel in operation in Europe, cannot come amiss at the present moment. The report of the commission has just been published in a bulky volume, evidencing minute research, careful consideration of results and systematic tabulation. It has been illuminated with many illustrations from photographs, taken by the commission in Europe, and numerous plans of the various furnaces in operation give to the report a value that is undoubted. In a future issue the contents of this report will be dealt with at greater length.

November 19, 1904

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO. LIMITED

TEMPORARY WAREHOUSE:

212-218 COWAN AVENUE, TORONTO.

Wholesale
only

Only
wholesale

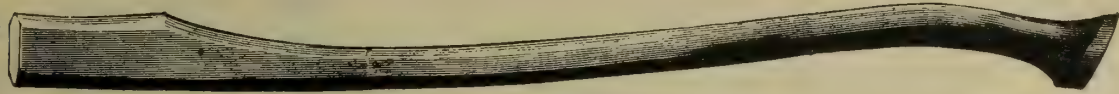
Sample Room at 40 YORK STREET, Telephone Main 4056.

Telephone:—Office, Park 1584

(Where orders may be left if not convenient to visit our Warehouse at Parkdale.) Telephone:—Warehouse, Park 1585

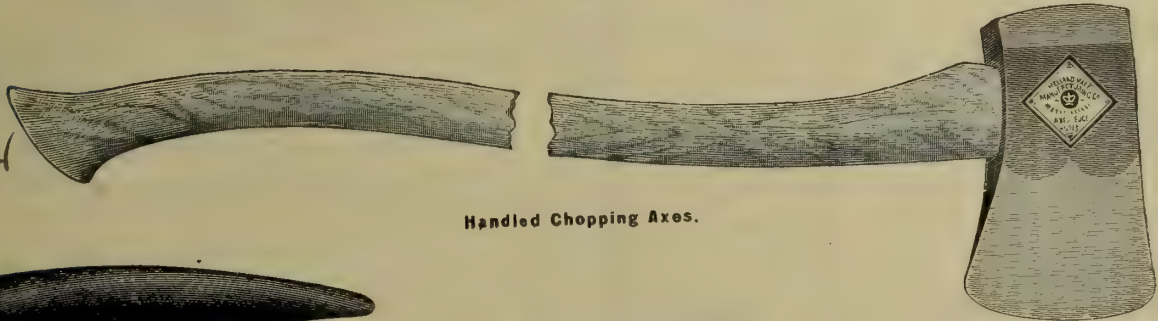
CHOPPING AXES and HANDLES.

RETURNED
NOV 18 1904



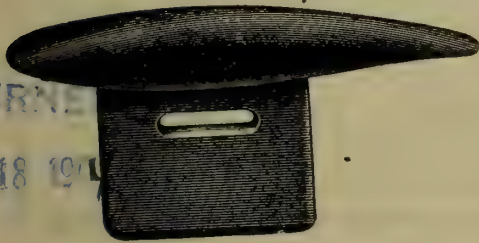
Single and Double-Bitted Axe Handles.

RETURNED
NOV 18 1904



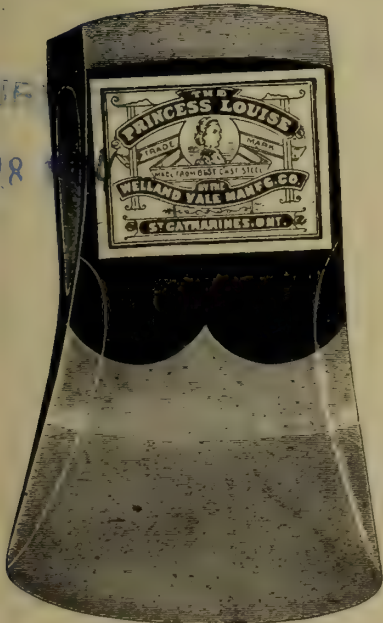
Handled Chopping Axes.

RETURNED
NOV 18 1904



Axe Wedges.

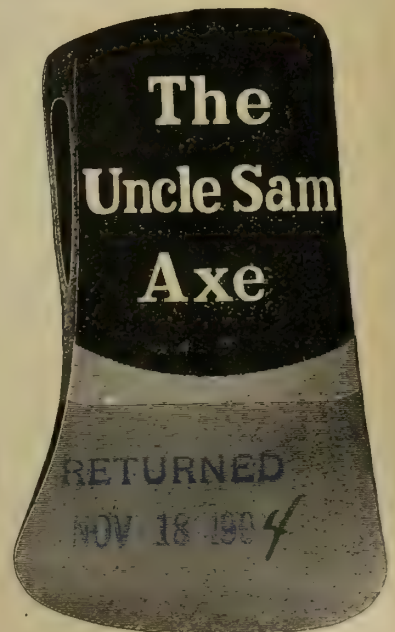
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Welland Vale Mfg. Co.



Robert Mann's.



Rixford Mfg. Co.

FOR OTHER STYLES OF AXES AND HANDLES SEE OUR HARDWARE CATALOGUE.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

GRAHAM NAILS ARE THE BEST.

We Ship Promptly.

Factory: Dufferin Street, Toronto, Ont.

Our prices are right.



Your Right Hand Friend

—So keep it there. Whenever a customer comes in take up a tin of

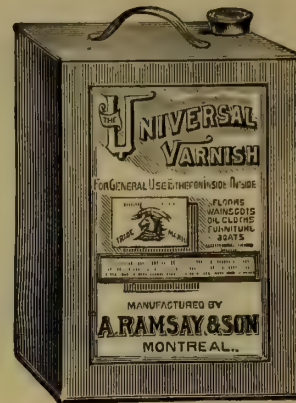
Gillett's Lye

and tell him or her some of its many uses.

9 times out of 10 you'll sell—and make a penny or so—pennies count.

E. W. GILLETT COMPANY LIMITED
TORONTO

RAMSAY'S VARNISHES.



The "Universal" is a clean and profitable line, always satisfying a customer, always bringing good results. When a customer asks for a real good varnish for his sleigh, his buggy, his door, his wainscots, his floor, his furniture, anything inside or out, don't hesitate; give him "Universal" at once insuring further sales and further profits.

A. RAMSAY & SON COMPANY

Established 1842.

MONTREAL.

Varnish Makers.



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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Nov. 17, 1904.

LITTLE change is noted in the activity that has characterized the plumbing supplies market for some time back. It is expected, though, now that freight rates have advanced that the demand for plumbing goods will fall off considerably; but as yet there is no such change. The heating season,

however, is expected to continue as before until well on in December.

Range Boilers—The demand for range boilers has fallen off very slightly and still many orders are being placed for installation in different parts of the country. Quotations are: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—The lead market is the highest that has been for a long time, but as yet no increase has been noted in the price of lead pipe, of which there is considerable moving. The discount is 35 per cent f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—A somewhat lessened activity prevails but the demand is still fairly good, former prices continuing to rule. Our quotations are: Soil pipe, standard, 50 per cent and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—The market is only fairly active. Discounts quoted on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—The price of iron pipe has not advanced as was prophesied. Manufacturers are keeping well up with the demand and much less cutting is being done than before. The market is very active. Our quotations are: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in.,

\$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,

Toronto, Nov. 18, 1904.

THE jobbers handling these lines of goods still continue to keep exceptionally busy. Orders from Western Ontario have increased and the demand from that part of the Dominion is now stronger than that of other parts.

The steady advance in lead and the fluctuating tin market is creating havoc amongst the jobbers and owing to this they will not guarantee quotations on price of solder for two days. Some prices on iron pipe have advanced while others have become firmer. No change has taken place in lead pipe and iron pipe fittings, although indications point to an advance at any time.

No definite statement can be made in regard to the outlook. Dealers are eagerly watching the prices of pig iron, lead and copper, as these markets affect the price of their manufactured goods.

Lead Pipe—A good trade continues with prices inclined to advance. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—An increase of 5 per cent. is noted in the discount on headers and nipples. Prices are steady with an inclination to advance. We quote nominally as follows: Malleable fittings 20 per cent for American and 35 per cent. for Canadian; cast iron (standard), 65 per cent.; headers, 60 per cent.; flanged unions, 60 per cent.; malleable bushings, 57 1-2 per cent.; cast iron bushings, 70 per cent.; nipples

up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A steady demand continues with the discount unchanged at 15 per cent.

Iron Pipe—Prices have advanced. Market is unsteady. Demand holds strong. Our quotations are: Black, 1-4 inch, \$2.04; 3-8 inch, \$2.10; 1-2 in., \$2.30; 3-4 in., \$2.88; 1 in., \$4.12; 1 1-4 in., \$5.68; 1 1-2 in., \$6.75; 2 in., \$8.98. Galvanized 1-4 in., \$2.80; 3-8 in., \$2.98; 1-2 in., \$3.20; 3-4 in., \$4.02; 1 in., \$5.80; 1 1-4 in., \$7.88; 1 1-2 in., \$9.45; 2 in., \$12.60.

Solder—Prices continue unchanged. Market is unsteady owing to fluctuating tin and lead market. We quote: Bar

solder is quoted at 17 1-2c and wire at 18c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 5 1-2 feet, 2 1-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 2 1-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D, A quality, \$5.40; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

putting the bad sanitary arrangements of their houses in good shape, and so are losing us plumbers lots of work and keeping up bad sanitary conditions besides."

It is a cold fact, as this young plumber suggested, that the foolish, unscientific, burdensome and expensive requirements of many plumbing laws and ordinances are to-day putting a premium upon the continuance of bad sanitary conditions in many homes and stand responsible for a degree of disease and mortality which sound and sensible substitutes would go far to prevent.

There is in fact a crying need of a general, competent, sound, fearless intelligent revision of these laws and ordinances. As the latter are usually based on the former, the work should begin with the state enactments, and be speedily followed by the local boards of health and health officers. The work should be the joint effort of a broad-minded plumber, a competent engineer, economically inclined, an enlightened health officer, a good lawyer versed in civic legislation, the American Public Association, the Committee on the Science of Hygiene and Public Health of the American Medical Association, and the Association of State Boards of Health. The state boards themselves might most advantageously take this up, especially if they approach it in a broad practical temper, not being governed, as has too often been the case among sanitarians, by a technical, extremely radical, theoretical frame of mind, ultra-scientific and administrative in tone. Better than either of the above, let the Carnegie Institutes, having ample funds for just such purposes of wide public utility, appoint a fully competent commissioner or investigator to study and report in print upon the subject, with carefully stated conclusions and the reasons for them.

I believe that state legislators and health authorities everywhere would be only too glad to put such conclusions into practical and effective shape, and substitute them for the regulations which plumbing laws call for to-day, not because they are sound and right, but because "they are the ordinances."

A plumbing inspector and a very excellent plumber on this work, recently admitted to me that the running trap required by certain ordinances was a danger rather than a safeguard; that the foot-vent as required was a nuisance, yet these and other unnecessary and impracticable features are demanded and insisted upon "because the ordinances require them." I might multiply the list indefinitely, but every reader of these lines knows the facts suggested. What wonder that the cause of sanitary science in our homes advances slowly, when the honorable dare not contem-

PLUMBING LAWS AND ORDINANCES.

By Azel Ames, M.D., Wakefield, Mass., in Modern Sanitation.

IT goes without saying that primarily the object of plumbing laws in states, and of ordinances of like character in municipalities, is to secure for the public safety from unhealthy influences known to reside in sewage and its gases.

It is, however, a fact well known to those familiar with these laws and their genesis, and with the advanced knowledge of recent years in sanitary science, including physics, bacteriology and pathology, that there is scarcely a state or community in which the so-called sanitary laws, and more especially the laws and ordinances relating to plumbing and sanitary construction, "fit the facts" or accomplish what they are ostensibly designed to do.

As a matter of fact in a very large percentage of cases they defeat their primary object, and are positively unsanitary in their results, while their enforcement by authority is an outrage upon the citizen, a travesty upon present sanitary knowledge, and a wrong to the honest plumber.

I say "honest" plumber advisedly, because of the popular belief that these plumbing laws and ordinances were dictated by plumbers with a view of making more work for themselves, while, as a matter of fact, it is an open secret that nine-tenths of the plumbing ordinances in cities and towns and not a few of the state laws of the kind are framed by local health authorities, either profoundly ignorant of plumbing requisites, or possessing a very limited and purely theoretical knowledge of the subject. Even in the State of Massachusetts, where for years the State Board of Health, the oldest in the country, was an active and component leader in promoting the public health, and by its influence built up in many directions sound laws and practices, and in certain

other states, sanitary enactments are bad, and are far behind the advances in sanitary knowledge, while the municipal ordinances based upon them are as unsound, heedlessly burdensome, and destructive of their nominally intended purposes as can well be.

This is due, as has been suggested, in no small number of cases to the fact that most of the now existing sanitary laws and ordinances were framed and adopted by those having but little sanitary knowledge, and since the time of their adoption have not been changed, amended and improved to keep pace with the rapid and positive advances in sanitation. The existing requirements of construction have been copied generally from one city and town by the other, with the result that the above named condition is very general.

While these laws and ordinances are such that it would seem as though they would greatly increase the amount of plumbing work to be done, they have produced an altogether different effect. Many persons realize that much of the work required is unnecessary and sometimes positively wrong. They have contempt for sanitary authority, and believing that the plumber has a hand in it, lack confidence in him. The firm conviction of all clean-sighted sanitarians, engineers, architects, plumbers, etc., is that the present burdensome errors of plumbing laws and ordinances are doing more to prevent better sanitary conditions in homes than almost all other factors.

A very bright and excellent young plumber of my acquaintance said to me only the other day, and told an important truth, "Doctor, these fool requirements of the plumbing laws and ordinances, which are both stupid and wrong, are, by their needless trouble and expense, preventing lots of people from

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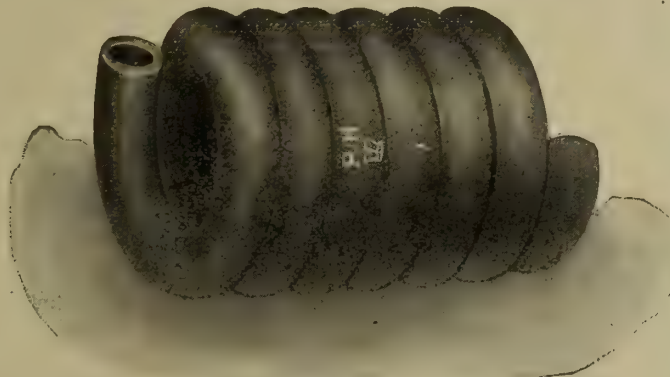
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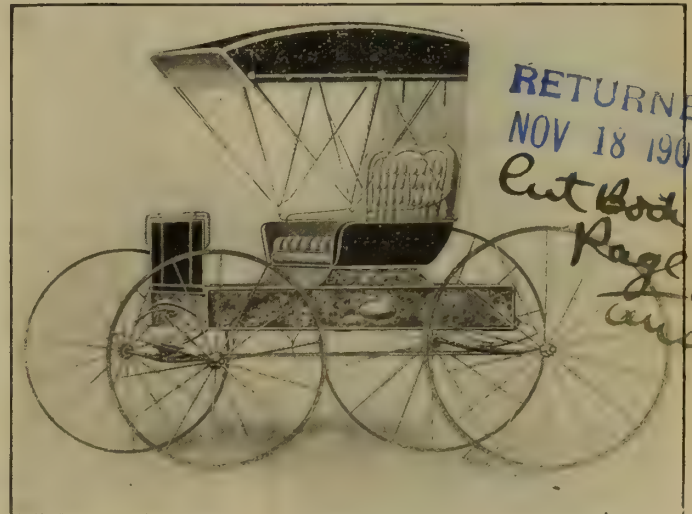
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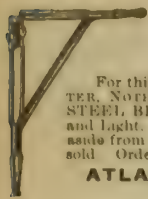


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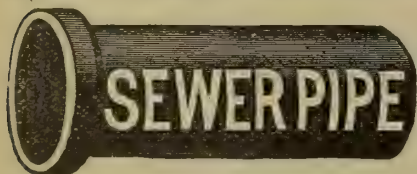
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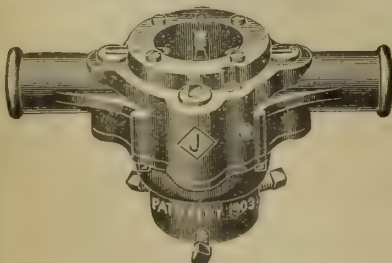
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plate the slightest change in the existing unsatisfactory conditions lest a general and prohibitive reconstruction shall be demanded, and the plumber when he enters the home is looked upon not as a benefactor "bringing healing in his wings," but as an ogre, the harbinger of destruction and bankruptcy. It ought not to be so. It can in a large measure be remedied and it should be.

(A criticism of this article by Mr. H. A. Knox, Ottawa, will appear in the next number of *Hardware and Metal*—Ed)

Building Permits.

TORONTO.

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J. W. Adare, dwelling, No. 828 Shaw street, \$1,200.

S. Crane, dwelling, Walmer road, near Dupont street, \$5,000.

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E. A. Forster, dwellings, Dupont street, near Avenue road, \$4,800.

Jas W. Hewitt, dwelling, No. 50 Beaconsfield avenue, \$1,600.

M. A. G. Fox, dwellings, Dresden avenue near Pape avenue, \$600.

Fred S. Duff, dwellings, Beatrice street near Collège street, \$4,000.

J. D. Falconbridge, dwelling, No. 22 Chestnut Park road, \$6,000.

C. H. Westwood & Co., office building, No. 72 Bay street, \$20,000.

Jos. Connery, dwellings, Hallam street, near Shaw street, \$1,400.

S. Ingleby, dwelling, Havelock street, near College street, \$2,700.

Jas. Worsley, dwelling, Woolfrey avenue near Logan avenue, \$650.

R. Tyrwhitt, dwelling, Admiral road, near Bernard avenue, \$5,000.

T. A. Lytle, dwelling, Huron street, near Bernard avenue, \$5,000.

W. W. Hiltz, dwellings, Smith street, near Logan avenue, \$4,000.

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E. Ockley, dwellings, Pearson avenue, near Sorauren avenue, \$4,500.

J. Drummer, dwelling, Dovercourt road, near Shanly street, \$2,000.

J. Endean, dwelling, Lansdowne avenue, near Wallace avenue, \$500.

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to dwelling, No. 586 Delaware avenue, \$200.

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S. R. Hughes, dwelling, Portland street near King street, \$2,200.

W. K. Cook, dwellings, Rusholme road, near Dewson street, \$6,000.

R. McDonald, dwellings, Rusholme road, near St. Anne road, \$4,000.

A. J. McCauley, dwellings, Nos. 181 and 183 Howland avenue, \$3,000.

A. C. Gray, dwellings, Markham street, near Herrick street, \$6,000.

F. Campbell, two-storey addition to dwelling, No. 81 Peter street, \$2,600.

J. R. Hoidge, dwellings, Palmerston avenue, near Olive avenue, \$2,200.

R. M. Wallan, dwellings, Nos. 310 and 312 Ossington avenue, \$4,500.

H. Larkin, dwellings, Sorauren avenue, near Queen street west, \$4,000.

F. W. Cox, dwellings, Nos. 754, 756, and 758 Gerrard street east, \$4,500.

J. I. Case Threshing Machine Co., office, Dufferin street near King street, \$1,800.

Thomson Bros, one-storey addition to marble works, No. 1194 Yonge street, \$1,500.

White & Co., dwellings, Ossington avenue, near Northumberland street, \$8,000.

A. Bedford Jones, dwelling, Prince Arthur avenue, near Bedford road, \$3,200.

Punty Mfg. Co., Limited, factory, corner Florence street and Brock avenue, \$5,000.

MONTREAL.

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Montreal Light, Heat and Power Co., Harbor street, alterations on factory, \$2,400.

AN UP-TO-DATE PLUMBING SHOP.

By N. O. M.

PROBABLY there is not a better known man in the plumbing trade in Toronto than Mr. Robert Ross, who has been living in the neighborhood of the corner of Dunn avenue and Queen street west for nearly a quarter of a century. Twenty-two years ago Mr. Ross came from Scotland and entered the employ of C. Weeks, a plumber doing business on the southeast corner of Dunn avenue and Queen street, and who is now in Vancouver. After continuing in the employ of Mr. Weeks for five years Mr. Ross bought him out and started in business for himself. After ten years of successful business on the old site, he moved across the street to the southwest corner and built the dwelling and workshop shown in the accompanying illustration. This was in 1897, and since then he has had, as a result of increased business, almost to double his staff of employees.

During the seventeen years in which Mr. Ross has been in business he has had a most prosperous career. This has been no doubt due to persistent concentration of time and energy on his business.

His business includes plumbing, gas fitting and steam heating, and he employs a staff of eleven men, two of whom are steam heaters, the rest being gas-fitters and plumbers. He employs also five apprentices as helpers to the mechanics. Mr. Ross had formerly a good connection with the country trade,



MR. ROBERT ROSS.

but as the local trade began to develop rapidly he found he would have to drop either the outside connection or the local. Believing the latter was by far the most promising of the two he dropped the outside trade and devoted his whole energy to the city work.

The building which Mr. Ross has erect-

ed on the southwest corner of Dunn avenue and Queen street is a building of three storeys and basement, with twenty feet frontage and between seventy-five and eighty feet depth. As can be gathered from the illustration, it has a substantial appearance. Beginning at the front of the building on the ground floor there is a showroom the width of the building by thirty-five feet, in which is displayed to good advantage everything in the plumbing line of business.

The first thing that meets the eye on entering is a long narrow showroom which is divided from the general showroom by a glass partition. In this showroom is displayed a complete line of gas fixtures and gasaliers. Mr. Ross should certainly be complimented on the modern methods he adopts in displaying his gasaliers. Inserted in the ceiling is a number of pipes. These pipes are but a few inches apart and cover the whole ceiling space designated for this purpose. Fastened to these pipes are fancy gas fixtures and gasalier holders, at the ends of which and covering the burners are fancy and artistically colored gasaliers, imitating a number as they would appear in practical use, the only difference being the great number and the many colors. These, along with the profusion of pretty fixtures, make a display of color and design which is very attractive to the eye.

Leaving this room the visitor enters the main showroom, where there is displayed a complete line of baths, zincs, basins, etc., standing exactly as they would when in use in a house. This is one of the strongest features in Mr. Ross' display of goods, and one which helps a great deal in bringing the mind of the prospective purchaser more quickly to a satisfactory decision.

In this showroom is also displayed a complete line of plain and fancy radiators, some of which are attached to pipes just as they would be when in practical use.

Descending a stairway at the rear of the showroom the visitor enters a workshop and stockroom in the basement. In the stockroom such articles as acids, pipes, solder, etc., are stocked ready for immediate use. The workshop is one of the important departments of Mr. Ross' establishment, for he is by no means dependent on the kind of work that is classified under the head of contracts, although he makes a specialty of it. The workshop is used for jobbing or repairing work, as well as for the threading of pipes used in gas and steam fitting.

With the cold months approaching the advisability of having a workshop and

the convenience derived therefrom both by the employer and employes is more noticeable, for the job work that would have been done outside during the warm months is now brought inside where it is done more quickly and without injuring the health.

At the rear of the showroom is a



Plumbing Store of ROBERT ROSS., Toronto.

complete office of modern equipment. This office is presided over by another member of the household, and it is certainly a credit to the man who signs himself Robert Ross, plumber.

Recent Toronto Contracts.

Robert Ross, plumber, Toronto, has received the following contracts:

J. A. Harrison, two offices, Nos. 1359 and 1361 Queen street west, plumbing.

A. M. Craig, store and dwelling, No. 1357 Queen street west, plumbing and hot water heating.

M. Pritchard, dwelling corner of Florence and Brock avenue, alterations and remodelling plumbing system.

Sanitary Report Issued.

Dr. Louis Laberge, health officer for the City of Montreal, has just issued his thirty-first report, which contains some very interesting statistics on the sanitary condition of Montreal city, information from which will appear in the plumbing department in a later edition of Hardware and Metal.

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BOOK DEPARTMENT

HARDWARE AND METAL,
Toronto

Electrical Goods and Supplies

To Separate Oil From Feed Water.

MANY are the efforts which have been made to separate the emulsified oil from the condensed feed water supplied to boilers, and it is doubtful whether this has as yet been managed in a very practical and satisfactory manner. The ordinary means of performing this operation have proven inadequate for the reason that the emulsified particles of oil are so exceedingly minute that they will pass through any filtering medium. There are chemical means of separation, but it is said that they also are not very satisfactory. In view of this the electrical process of separation, to be known as the Davies-Perrett process, recently discovered, should prove of interest. By this process the oily water is allowed to run over and under plates of iron placed vertically in a wooden tank. The plates are connected alternately to the positive and negative poles of a dynamo or battery, so that the current passes from one plate to another through the flowing water. After this treatment the oil and water, which entered one end of the tank as a milky fluid, pass out the other end with the emulsified oil coagulated completely. The water and oil are then passed through wood wool, and then through a sand and sawdust filter, in which the oil is removed. It is stated the water upon emerging from this filter contains no trace of oil. This system is undergoing a practical test in Tottenham, England, where a plant with a capacity of 3,500 gallons per hour is in operation.

Electric Ovens.

AFTER various tests of gas ovens and super-heated affairs of varied descriptions, electricity was applied, and electrical ovens have been universally adopted for testing purposes. The electrical oven has the advantage of producing an exact degree of heat for every volt put into the heater and at the same time avoiding draughts and the opening of doors to control it. Before mixing the flour sample, it is brought to sixty degrees of temperature.

Exact weighing of everything is essential and the dough of each sample is kneaded with perfect uniformity and then left to rise in an electrically heated case, where it and the thermometer can both be watched through a glass door. Asbestos lines the oven throughout and it is encased in sheet steel and oak; thus there can be no possible radiation from it. By the rotation of the steel

shelf on which the loaves are placed, a guarantee is given of their receiving equal treatment from the heat of the oven. Afterwards the loaves are weighed and measured, which is a remarkably interesting process of getting at the exact cubical contents. The loaf is placed in a box and surrounded with mustard seed, which is measured for the displacement after the loaf is removed. The loaves are then cut, numbered and placed on a long table. There the millers meet, not one knowing the number borne by the bread from their own particular mill, and judgment is passed upon the whole batch. If the milling is at fault it is made evident by this searching exam-



Electric Oven.

ination. The tests and reports upon the bread are filed away in the archives of the company each day.

A dainty little furnace is employed by which means Mr. Gray determines the amount of ash in the flour. Here and there are noticeable retorts in which the flour is boiled into acids for various purposes. The delicacy of the instruments used may be shown in the fact that the variation of acidity between different grades of Ogilvie flour has to be detailed in hundredths of one per cent. To go into the details of gluten and gliaden contained in flour would be tiresome because of its technical interest only; but when it is explained that gliaden is simply a sort of vegetable glue which holds dough together, bread eaters may be interested. It is from the

relative proportions of gliaden and gluten that they get their nourishment. This fact has been known to science for only a few years.

The Electric Locomotive.

The development of the single phase alternating current motor by the General Electric Co. makes it possible to consider seriously the installation of electric locomotives for trunk line service. With this motor it is possible to deliver current to moving units at a pressure of 2,000 to 3,000 volts on the trolley, with the effect of reducing the amount of current to be handled by the moving collectors and of increasing the radius of distribution without a prohibitive cost of distributing conductors.

MANUFACTURERS AND EXPRESS COMPANIES.

At the last monthly meeting of the Montreal branch of the Canadian Manufacturers' Association one of the principal items of business discussed was that of carriage by express or freight. The general opinion was that the importer who wishes to receive goods within reasonable time after shipment should have them sent by freight.

In support of this, a committee was appointed which will wait upon the American Express Company and the collector of customs to register complaint in regard to the delay of express parcels going through the customs examining warehouse.

To further place themselves on record regarding the matter the association passed a resolution as follows: "That in the opinion of the executive committee of the Montreal branch of the Canadian Manufacturers' Association, it is advisable that the express companies should be placed within the jurisdiction of the Railway Commission."

A report was received in the meeting to the effect that the Dominion Trades and Labor Congress will not consent to the presence of the National Trades and Labor Congress at the special conference with the Manufacturers' Association, which the former requested some time ago.

It is probable, therefore, that the manufacturers will give the National Congress a separate conference.

Mr. Walter B. Champ, treasurer of the Hamilton Bridge Co., Hamilton, was assaulted on the evening of November 11 by an unknown person.



ELECTRICITY SIMPLIFIED

By Prof. T. O'Connor Sloane.

This work is the simplest ever published on the subject of Electricity, and does something not hitherto accomplished. The object of "Electricity Simplified" is to make the subject as plain as possible, and to show what the modern conception of electricity is; to show how two plates of different metals immersed in acid can send a message around the globe; to explain how a bundle of copper wire rotated by a steam engine can be the agent in lighting our streets; to tell what the volt, ohm and ampere are, and what high and low tension mean, and to answer the questions that perpetually arise in the mind in this age of electricity.

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Price, \$1.00.

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A Word With You

When we say that our

Asbestos Furnace Cement

and our **Asbestos Plastic Stove Lining**

are absolutely the best made, we mean it, every word of it.

"Money back" proves it. Circular tells all about it.

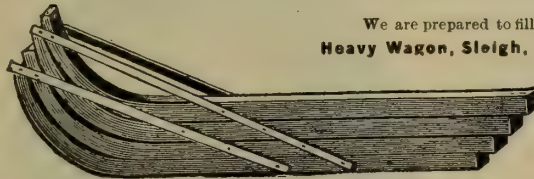
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We are prepared to fill any orders for
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We make a specialty of heavy stock and can fill orders promptly made from the best of oak and hickory as we carry a large stock of lumber and can make any sizes that may be required. We make it a point to fill orders promptly.

If you need anything in our line we will be pleased to hear from you and we will give it our prompt attention.

J. S. LOUGHEAD & SON,

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The "Economical" Hot Water Boiler

is constructed on radically new lines, and it won't take five minutes to convince you that it is an improvement on any hot water boiler hitherto made.

Water heats Quickly. Fire does not die

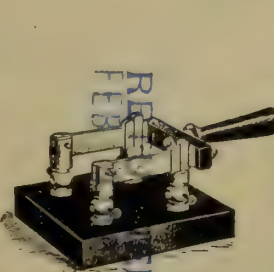
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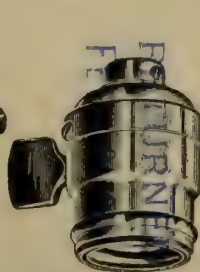
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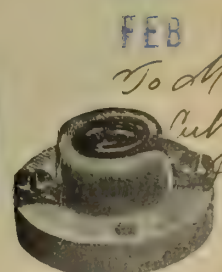
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Candelabra Socket, 25c.
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Miniature Receptacle, 6c.
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(for decorative work)

These prices net to trade only. Write for our quantity prices.

The Sayer Electric Co'y, MONTREAL

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A PROSPEROUS COMMERCIAL BODY.

THE quarterly meeting of the members of the Dominion Commercial Travelers' Mutual Benefit Society was held in the association rooms on Saturday, November 5, at 3 p.m. Mr. Alex. McA. Murphy, the president, occupied the chair.

The reports presented were of a very satisfactory nature and met with the approval of all present. The nomination of officers for the ensuing year resulted in the re-election of Mr. Murphy as president, Mr. Richard Booth as vice-president, and Mr. Charles Gurd as treasurer. The following were nominated as trustees: Joseph W. Rousseau, John E. Wright, John Hardie, J. H. Ferns and James Robinson. This action being unanimous, the society was freed from the necessity and expense of a competitive election. The total paid for death claims during the year was \$12,000.

Among those who addressed the meeting were David Watson, George Nann, J. S. N. Dougall, president of the parent association, and Mr. Fred Birks, the society's first president, who spoke in glowing terms of the progress the society was making. Fifteen members were admitted at a meeting of the trustees subsequent to the general meeting.

The Mutual Benefit Society was organ-



A. MCA. MURPHY

President of the D.C.T. Mutual Benefit Society, Montreal.

ized in January, 1886, for the purpose of providing commercial travelers with a safe, easy and economical means of making provision for their families in case of death. Organized on a strictly mutual basis, it has steadily grown from a very small membership in the first year until now, after 18 years' existence, the membership is over 1,100,

thus assuring the payment of \$1,000, which is the maximum.

The sum of \$170,000 has been paid in death benefits since organization. The affairs of the society, which are on a solid basis, have passed successively through the management of trustees, elected annually, who have shown capacity, energy and devotion, all freely rendered. The prospects for the future of the society are bright.

TRADE CONDITIONS IN BIRMINGHAM.

By H. B.

SIGNS are manifesting themselves that lead us to hope with some assurance that the long period of depression which Birmingham and the surrounding district has been experiencing has reached the high-water mark and that the tide is turning. Both the Lon-



REG. W. GRAHAM

Secretary of the D. C. T. Mutual Benefit Society, Montreal

don Stock Exchange and local industries display an upward tendency. But although inquiries are more numerous and travellers are sending home larger orders, so far the volume of trade is not more than sufficient to find full employment for the much reduced numbers of operatives who have been retained during the bad times. We have to face the Winter and the question of larger numbers of unemployed at one and the same time. Luckily, so far as fine weather and good crops of grain and fruits are concerned, the Summer has been most favourable, and fair mild weather is carrying us well into the midst of the Autumn. In spite of the propitious weather, however, the building trade is remarkably quiet, and the secretary of our local district association reports that only two or three of the large firms are even fairly employed. This

naturally affects the home market for constructive iron work and builders' ironmongery.

• • •

Improvement is apparent in the brass and metal trades, and in jewellery, electro-plate, hollow-ware and light steel toys. But, as I have intimated, there is little pressure, and although



CHARLES GURD

Treasurer of the D. C. T. Mutual Benefit Society, Montreal

here and there an improvement is to be noted in orders for abroad, the demand is still far below the normal. In general hardware there has been some increase with Europe, Canada, The United States, South America, and particularly with India.

• • •

With regard to our local relations with Canada it may be stated with satisfaction that so many firms are seeking information at the disposal of the Canadian Government's commercial agency, that Mr. Ball is arranging to remove into larger offices, where the increasing business of the agency may be carried on with greater convenience.

* * *

In Wolverhampton the demand has increased somewhat for the heavier iron manufactures of this district. There is a good demand for iron hurdles and fencing, and constructive iron workers are fairly well employed. Edge and plantation tools for export are in some demand, as also are shipmongery goods. The coming Winter season has also influenced the demand for hollow-ware and galvanized goods generally.

In connection with the market for raw material it is encouraging to observe that sellers are more cautious in entering into contracts for extended delivery and that the quarterly meetings of the

trade have resulted in increased orders for raw finished iron and steel.

• • •

While the world generally is none too busy, it must be remembered that Great Britain is only slowly recovering from a costly war. You cannot take two hundred and fifty millions out of even an Imperial pocket and spend it mostly out of the country from which it has been withdrawn without individuals feeling the pinch and money becoming scarce. But, as I have said, there are indications in many quarters that a turn is taking place, and but for the knowledge that the Winter must be met with trade in a state of slow recovery, we could look to the future with increased hopefulness if not indeed with complacency.

* * *

The Birmingham Chamber of Commerce recently considered a communication from the Liverpool Chamber relating to the requirements respecting certificates of value under the new customs regulations in Canada. These regulations provide that invoices in duplicate and properly certified to shall be delivered with bills of entry for all imported goods, and that every such invoice shall contain a sufficient description of the goods and shall show in a separate column the fair market value of the goods as sold for home consumption in the country of export, without any deduction for cash, or on account of any bounty or royalty payable thereon when sold for home consumption, and not payable when exported. The chairman in moving the adoption of the report of a committee to which the matter had been referred said it was absolutely impossible for the Canadian regulations to be carried out, but that any practical scheme that the Liverpool Chamber could suggest would be cordially supported.

FACTORY IN TORONTO.

HENRY DISSTON & SONS, the large saw manufacturers of the United States, have finally decided to manufacture their saws in Canada. Hardware and Metal printed a letter from this firm two weeks ago in which they intimated they were negotiating for site in Toronto. It has been learned on the best authority (in fact from the gentleman who put through the deal) that they have purchased property in Toronto on Lombard street, which extends through to Adelaide street. It is understood they will commence manufacturing here as soon as possible. For some time two or three of the large saw companies of the United States have been considering the advisability of erecting a factory in Canada. The greatest handicap they have is the delay which is necessary in filling orders.

If a manufacturer breaks a band saw very often he wants it replaced within a day or so. The Canadian firms have a decided advantage in being able to fill such orders on short notice.

THE JAMES SMART CO.'S FIRE.

Through a fire at Brockville, Ont., in the early morning of the 16th inst. the works of the James Smart Mfg. Co., Limited, suffered in two departments, the wood working branch being entirely destroyed and the tool department temporarily disabled. The remainder of the plant producing general hardware and stoves, furnaces and ranges escaped injury and is continuing operation as usual. Some indulgence will doubtless be looked for from customers who have orders placed for the products of the burned departments.

TRADE NOTES.

The Bell Foundry Co., Seaforth, have received the contract for the machinery for the new saw mill to be erected by Ross & Taylor, at Exeter.

James & Reid, Perth, Ont., have purchased the general hardware stock of Thomas Elliott, to which they will add a bankrupt stock bought in Montreal, and run both stocks off in Mr. Elliott's old stand.

W. E. Lachance, commercial traveler, who has been with Wood, Vallance & Co., wholesale hardware merchants, Hamilton, for twenty-three years, has resigned to go into business for himself.

Sherwin & Cotton, manufacturers of tiles for interior decoration, Hanley, Staffs, England, have been awarded a gold medal for their exhibit at St. Louis.

The Guelph Foundry Co. have lately arranged with Panneton Bros., Montreal, to take the agency for their stoves, etc., for the Province of Quebec. Panneton Bros. are opening a warehouse where they will stock a full line of the "Grand Idea" and "New Idea" stoves, ranges and furnaces. This firm are well known to the trade, Mr. Arthur Panneton having formerly been connected with the Standard Foundry Co., of Longueuil, Quebec, and Mr. Eugene Panneton with the Dominion Hardware Co., of Montreal. The company anticipate a flourishing trade in Quebec, the territory having already been opened up as far as Quebec City.

LARGE ADDITION.

The Gurney-Tilden Co., of Hamilton, are building a large addition to their establishment. This has been found necessary owing to their increased trade in the western part of Canada.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion. Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

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100 words, each insertion, 1 year.....	\$30 00
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BUSINESS CHANCES.

FOR SALE—Good paying tinshop; good dairy trade; large eavetrough business; everything complete for the work; stock, tools, horse, rigs, cheap. R. B. Scriven, Otterville, Ont. (48)

HARDWARE BUSINESS FOR SALE—In a thriving town in Western Ontario. Satisfactory reasons for selling. Stock new and well bought amounting to say \$3,500, business well established with but one competitor. Apply, Box 197, HARDWARE AND METAL, Toronto. (50)

MECHANICS WANTED.

MOUNTERS WANTED—at once—one stove and one furnace moulder; steady employment. Clare Bros. & Co., Limited, Preston, Ont. f

STOVE-PLATE moulders wanted—steady job; comfortable shop; best wages. The William Buck Stove Company, Limited, Brantford. f

TO IRON AND STEEL MANUFACTURERS.

FIRM of iron and general merchants well placed for advantageous buying, is prepared to act for colonial houses as buying and shipping agents on commission, of iron and steel and manufactured goods. Address in first instance Box 2325, Sell's Advertising Offices, Fleet street, London, Eng. (48)



Don't book your order for lanterns until you see our improved **COLD BLAST LANTERN** and get our prices for 1905. We lead, others follow. **HAMILTON, ONT.**
E. T. WRIGHT & CO.,

"SILVERWARE THAT SELLS"

ORDER \$25.00 WORTH

Send us an order for Silverware for immediate shipment, for twenty-five dollars worth, if you do not wish to make it larger. We shall send you an assortment which experience has established as being safe and saleable. You can trust to our judgment. We positively guarantee the selection to be satisfactory. Between now and Christmas you ought to be able to sell every piece, and at an excellent profit.

You will have the satisfaction, too, of selling the best Silverware manufactured. This mark is a pledge of highest quality, best workmanship, and newest designs.



OUR CATALOGUE FREE IF YOU ASK FOR IT.

STANDARD SILVER CO., LIMITED

HAYTER STREET, TORONTO



QUITA RANGE

A New, Light and Inexpensive Steel Range.

Burns Coal, Coke or Wood.

Has a three-piece expansion top, large drop broiler door, large end shelf, duplex grate which is reversible for coal or wood, large ash-pan, sectional leg base, interchangeable flush reservoir and a handsome high shelf.

The Quita, although a cheap range, has all the strong points of our better lines.

Burns Coal, Coke or Wood.

No.	Cooking Holes	Size of Oven, Ins.	Length of Wood Fire Box, Ins.	Shipping Weight, lbs.		Tel. Code	
				Sq.	Reser.	Sq.	Ext.
9	4 9-in.	16 x 21	21	240	250	Canoe	Camlet

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Dowswell Mfg. Co., Hamilton.

GERMANY AND TRADE.

THE expression "Made in Germany" has become a household word all over the world. Recently it has been emulated by the expression "Made in Canada," and other countries would do well to follow Germany's example in matters of trade. Germany as a trader has become a great and dangerous rival to Great Britain, as well as the United States. The secret, however, belongs to Germany only in part. Her system of technical schools is one of the strongest factors in her industrial prosperity. The technical school produces keen, capable and well-drilled young people, who take their places in different industrial institutions all over the land. It is well known that technical schools are comparatively new in this country, and even then they are not nearly as important a feature of the educational system as they ought to be. To illustrate the uses of

a technical school would require an exhaustive inquiry into the large emporiums of trade throughout Great Britain and this continent.

Certain rudimentary facts, however, are easily obtainable and in this connection it is no secret that young Germans find ready employment in the large business houses of England and North America, being as a rule more versatile and able to do more work at less money than any other single man available. As a rule they know English, German and French thoroughly which at once places them in a position of trust and importance; at the same time their training in the technical schools has taught them the elements of business that the employer himself has taken years to learn. In addition to this they have a comprehensive knowledge of other lines of business, much of which is very little short of expert information. In fact a large manufacturer from London stated the other day that he had one German doing work which formerly required three English clerks. This might not have been the result of the technical schools, but of exceptional ability. However, there is no doubt that the technical school is a force which could be adopted in Canada with a great deal of profit. Our young men have to spend a lifetime in order to learn a business, and owing to the queer public school education they often have to learn a great deal of the ways of other countries entirely through the channels of commerce.

It would not do to make the slightest reflection upon education for purposes of culture, but many a lad would be more grateful to his teacher and his parents if he had been taught shorthand instead of Euclid, and thoroughly drilled in sound arithmetic instead of Greek and Latin, above all some practical facts about the ways of the world, and the inner workings of commerce. Dotted all over the Dominion the young Canadian will meet in competition with the young German and with all due respect to the capability of the average Canadian boy, he will find in the German a dan-

gerous rival who not only has a better training for business, but he will work for less money.

If the Canadian is to be really successful in grappling with modern business conditions in the face of such keen competition, some radical changes in the educational system at present in vogue in Canada are necessary. It is gratifying to learn that a movement has been started in the Montreal Board of Trade, with a view to the establishment of technical schools in that city. Toronto is in the lead in this respect, having at the present time a well-equipped technical school whose work is meeting with general approbation.

CANADIAN PLUMBING GOODS IN AUSTRALIA.

THE opportunity that exists for profitable export trade with Australia by Canadian manufacturers of plumbing goods and supplies, has probably never been realized. The conditions are such in that country as to create a very large demand for porcelain lined and enamelled baths with complete fittings, such as are manufactured here. While of late Canadian manufacturers of these goods have been kept busy supplying the home market, there is no reason why they should not reach out with every prospect of obtaining a fair share of that desirable trade.

In this connection D. H. Ross, Canadian Commercial Agent of Australia, in this week's report of trade and commerce, says:

"Application was made at this office a few days ago for catalogues and export price lists of Canadian enamelled and porcelain-lined baths with complete fittings. I regret I was unable to submit illustrations or prices, as manufacturers of these goods have neglected sending the necessary information to this commercial agency.

"To give some idea of the demand, it may be stated that an apartment house, shortly to be erected in Melbourne, will require 47 high-class baths, and also the usual sanitary fittings sold in connection therewith. I fear this order will be placed before any catalogues can reach me, but Canadian manufacturers of these goods should be aware of the

fact that the demand for baths in Australia—owing to the climatic conditions—is a very large and constant one."

This should awaken plumbing goods manufacturers to the possibilities of trade in that line, with a sister colony, and to a further means of materially advancing our commerce and developing a trade which should receive the greatest encouragement.

TO CURB THE GIVING OF PREMIUMS.

OWING to the unprecedented growth of the premium-giving idea all over the United States the various mercantile associations there have found it necessary in the interests of trade to join hands in an attempt to stamp out what they consider an evil of the worst kind. It is stated on reliable authority that scarcely a single one of the necessities of life is sold in the United States to-day without carrying, either through its wrapper, trade-mark, label, box-front or other token, some sort of premium value. The great objection thus far to any of these individual premium plans is that the average consumer does not purchase enough of any one commodity to entitle her to a premium of any considerable value, and that in consequence the public has been deluged with cheap and trashy premiums.

The latest development, however, which has aroused the animosity of American grocers and general merchants is a plan devised by the leading manufacturers of the United States whereby the purchaser of soap, cereals, condensed milk, canned goods, tea, coffee, cocoa, soups, extracts, baked beans, figs, shoe polish, catsup, salad dressing, olive oil, smoking tobacco, cigars, cigarettes and over three hundred different brands of consumable commodities, may secure, instead of the inferior clap-trap premiums something handsome and substantial.

The strong sentiment prevailing throughout a large section of the American trade against what is conceded to be a phase of the trading stamp system will be appreciated in Canada and especially in Ontario where the same evil has been cropping up of late. The Can-

adian and American trades are of the opinion that an educational campaign reaching the consumer is what is needed to put a stop to this foolish premium business. As soon as the housewife becomes "wise" to the fact that she is being "gulled" and "humbugged" she will make her displeasure so manifest that the premium-giving practice will stop in short order. Some of the more conservative business men are in favor of giving the system a loose rein, in the hope that it will soon die out of its own accord. The difficulty here is that much harm is being wrought in the meantime.

There are grave economic abuses in connection with the trading stamp and premium giving business which call for the united opposition of business men. The harmful effects are universally recognized by merchants as a deadly parasite upon trade whose abolition is earnestly sought, not only by those who have not adopted the system, but by those who have been deluded into believing it a benefit and have made use of it accordingly. Its primary effect, as we have often pointed out, is to delude the public into believing it is getting something for nothing, when in fact the public is paying for more than it receives. This glittering inducement has so much attractive power for the moment that it diverts a considerable volume of trade from the merchant who does not offer trading stamps to the one who does; the benefit to the latter, however, is only momentary, for the reason that as soon as the facts of this diversion of trade are fully known other merchants are in self-defence compelled to arrange for trading stamps with other companies and to make still more glittering offers to hold the trade or to attract back that which has been lost. The result is extremely detrimental to all. A few leading stores having adopted trading stamps from motives of policy, most of their principal competitors are likewise compelled to adopt trading stamps, while hundreds of smaller concerns being unable to get the trading stamps under the exclusive contracts which are made by the companies suffer in their business with the result that trade generally becomes demoralized. This has been the experience wherever trading stamps have been used. The fundamental basis on which the whole business rests is the

delusion of the public. The incidental effect is the demoralization of business, the ruin of small dealers where the practice is general and the enrichment of the trading stamp companies.

NO SUCH PERSON.

IN our issue of September 17 we published an editorial exposing a disgraceful and harmful case of misrepresentation in the Old Country. An individual, ostensibly representing a Canadian publication, interviewed manufacturers and exporters in England, with a view to securing their advertisements for his paper, and, as an argument, stated that it was a Government subsidized trade organ. He further offered to supply lists of Canadian buyers, which, on the face of them, were entirely incorrect.

We are glad to note that the Birmingham Gazette and Express took up the question and reproduced our editorial in full. Through this agency the matter has been brought to the attention of the Canadian High Commissioner, Lord Strathcona. Lord Strathcona immediately issued a complete denial to the claims of the agent that his paper was a Canadian Government organ.

In his letter to the Birmingham Gazette and Express, Lord Strathcona said, "I shall be glad if you will allow me to state that no such person as that alluded to (in the editorial in Hardware and Metal) is employed by the Canadian Government."

"It may also be added that abundant facilities for procuring information concerning Canadian affairs are always at the disposal of the British public, and inquiries may be directed either to this department or to the numerous Canadian Government agencies in the United Kingdom."

AN ERROR CORRECTED.

We wish to direct the attention of our readers to an error, which occurred in the technical book column of our issue of November 5. The four pocketbooks reviewed there, viz., "Building Trades' Pocketbook," "Mechanics' Pocket Memoranda," "Business Man's Pocketbook," "Coal and Metal Miners' Pocketbook," were wrongly quoted at \$3.50, \$3, \$3 and \$3 respectively. They should have been quoted at \$1.50, \$1.50, \$1.50 and \$3. These books are obtainable at the Toronto office of the International Correspondence Schools, 401 Temple Building, Toronto.

MASTER PLUMBERS IN CONVENTION

A Report of Semi-Annual Convention of the Ontario Master Plumbers' Association.

THE sturdy development of the Provincial Association of the Master Plumbers of Ontario was evidenced at the semi-annual convention, held at the rooms of the Toronto association, 21 Richmond street, on Thanksgiving Day, November 17, 1904. The large number of delegates present said much for the ever-increasing interest taken in the work of the association by the members. The different reports also showed that more and more of the master plumbers throughout the towns and cities of the province were beginning to recognize that "unity is strength"; and, as a consequence, many new members were being added to existing local associations and also new local associations were being formed as a result of the good missionary work done during the past Summer and Fall by the officers of the Provincial Association.

At the convention were seen the familiar faces of those who have ever taken a keen interest in the welfare of the association. Mr. Wm. Mansell, the able president of the association for two consecutive years, occupied the chair. On his left sat Mr. W. H. Meredith, secretary, a veteran in association work. The well-known face of Mr. W. J. Walsh, vice-president, was also to be seen, and ranged around the table were the other officers of the association, Messrs. Lewis LeGrow, financial secretary; J. K. Wilson, treasurer, and H. Mahoney, S. Mellon and E. H. Russell, all members of the executive. One of those present, and one whom every one was glad to see, was Mr. Robert Ross, president of the Dominion Association. As the president entered the room he was greeted with "Good morning, papa!" "Hello, father Ross!" etc. The face of Mr. Wm. Smith, of London, the man whose opinion is always sought, was missed from among those present.

CREDENTIAL COMMITTEE.

The report of the Credential Committee, consisting of S. Mellon, Hamilton, chairman; D. J. Morgan, Toronto, and H. Mahoney, Guelph, showed that the following delegates were present:

President—Wm. Mansell, Toronto.
Vice-President—W. J. Walsh, Hamilton.
Treasurer—J. K. Wilson, Toronto.
Secretary—W. H. Meredith, Toronto.
Financial-Secretary—L. LeGrow, Toronto.
Executive Committee—H. Mahoney, Guelph;
S. Mellon, Hamilton; E. H. Russell, London.

Delegates—R. Ross, W. Wray, D. J. Morgan, Geo. Clapperton, W. H. Raine, J. Fullerton, C. H. Beavis, Geo. Cooper, W. A. Tippen, J. B. Fitzsimons, R. T. Robinson, A. Wright, W. Bodington, J. McKittrick, R. Harrison, H. J. Hayes, E. Larter, A. S. Purdy, C. Robertson, J. Ross, R. J. Leaman, F. Armstrong, of Toronto; H. Wallace, A. Rogers, T. Davis, Wm. Clark, Hamilton; D. Noble, London; T. A. Cowan, W. A. Clipper, Brantford; T. Phillips, Orillia; C. Bull, St. Thomas; D. Kerr, R. Ross, W. J. Barrie, Sarnia; Wm. Sarvis, Listowel; F. Smith, E. B. Wellsby, A. Malcolm, Guelph; J. Boxall, Lindsay; H. J. Peters, J. Myers, F. Smith, Stratford; G. H. Ling, Barrie; W. A. Silvester, Stouffville.

Before the opening of the morning session the master plumbers showed themselves to be jolly good fellows by the hearty way in which they met each other; and during the time which preceded the opening of the convention good-fellowship reigned.

Before the convention was formally opened, Mr. Meredith, on behalf of the Toronto Association, which association acted as host to the visiting delegates of the convention, gave all those present a very cordial invitation to the informal dinner and entertainment to be held at McConkey's in the evening.

Morning Session.

The morning session was opened by the reading of the minutes of the second annual convention, held on Good Friday last in Hamilton. The chief business under discussion at this convention had been the consideration of the appointment of a permanent organizer for the province and also the placing of \$300 in the hands of the Executive Committee for organization purposes. The motion of adoption of the minutes was moved by R. Ross, Toronto, seconded by H. Mahoney, Guelph, and carried.

Then followed the report of the president, which was as follows:

PRESIDENT'S REPORT.

Toronto, Nov. 17, 1904.

To the officers and members of the Ontario Master Plumbers' Association:

Gentlemen—It is with pleasure I welcome you again to our semi-annual meeting and thank you all for absenting yourselves from your homes on this our day of thanksgiving throughout our prosperous and growing Canada.

I trust that your business pursuits for the past year have been such that you

all feel thankful for the bountiful business season that has been ours.

I trust that all the business that may be brought before us will be carefully considered, and what is transacted may be for the best interest of our members.

Since our annual meeting held in the city of Hamilton on April 1st last our secretary, Mr. Meredith, has been indefatigable in incessantly working for the interests of our association. I can honestly say that all the time he has to spare from the duties of the Toronto association has been devoted to the organization of this association.

The growth and advancement shown since our last meeting is very gratifying and I am sure will meet with your approval.

At our meeting in Hamilton it was decided to hold this meeting in the city of Peterborough, hoping by so doing, we could sow our good seeds and increase the branches of our association in the towns and cities to the east of us; but, owing to circumstances, your sub-executive thought it advisable to again hold it in the city of Toronto.

Just here let me say a few words (without prejudice) and as the president of your association. Many of you will remember a very spirited discussion which happened at our last meeting in regard to the number of members sent in by the Toronto local and the per capita paid by that association. Toronto association, having a membership of about 118 members, should pay half yearly \$354 per capita tax to this association, which entitles that association to a delegation of twenty-four members to this meeting, an overwhelming power in the administration of this body, and one, which in the interests of the members should not exist.

Gentlemen, I think a special committee should be elected early in this meeting to bring in a report for your approval whereby the Toronto association should be reasonably represented on a fair proportion of per capita tax on its members.

During the last six months I, accompanied by our worthy secretary, and he, accompanied by Mr. Robert Harrison,

SECRETARY'S REPORT.

have visited several towns and cities spreading the gospel of the Master Plumbers' Association, and I know, gentlemen, it has been sown in good soil, and many of our members are gathering the fruits of our labors.

Last July, with Mr. Meredith, at the invitation of the master plumbers of the city of Winnipeg we journeyed out to that prairie city and organized the craft there into one of the strongest local associations in our Dominion.

In the early part of September the National Association of Master Plumbers of the United States held their annual convention in the city of St. Louis. An invitation had been received by our National association, who, in their wisdom, delegated their president to represent them at that meeting.

During the month of August, the board of managers of the Toronto association considered the matter, and in their judgment thought by sending a delegation from that association to assist Mr. Ross in his efforts, untold benefits to the master plumbers of Ontario and especially the members of our association could be attained.

After arriving at a decision Mr. Fred Armstrong, Mr. R. Harrison and Mr. Meredith were selected, and gentlemen, the result of that step by the Toronto board is astounding and by the generosity of the Toronto local association to the amount of \$300 a link has been welded between the master plumbers of the United States and the master plumbers of Ontario and the whole Dominion of Canada that I hope will never be broken.

The courtesies extended to these gentlemen, and the arrangements agreed to and entered into between that association and our members are phenomenal, considering it being the first time that members of our Canadian institution have been recognized, and may the chain now started be built link by link till we are all inclosed in one strong girdle for its mutual benefits, and in closing let me ask you all to weigh well the business brought before you in a businesslike manner. Don't harp on technicalities or points of parliamentary ruling, but what is best and in the interests of the craft in general, having in view our motto "All for one and one for all."

Respectfully yours,

WM. MANSELL.

The secretary, Mr. Meredith, then read his report, which is as follows:

President, officers and members of the Ontario Provincial Association of Master Plumbers: Gentlemen,—While this is the semi-annual meeting, you will no doubt be looking for a report as to the work that has been accomplished during the interim since the annual meeting which met in the city of Hamilton on April 1 last. As you are aware, at that time we were instructed to push the organization work of the association. We are able to say that it has been our good fortune to have accomplished fair results along this line.

While it is very hard to get the craftsmen in all the towns and cities to come together, we have been successful in organizing associations in the following towns, some by correspondence, others by personal visits:—St. Thomas, with seven members; Peterboro, with four members; Owen Sound, with six members; Port Arthur and Fort William, with six members.

Additions have been made to Berlin-Waterloo by two members, the Hamilton association by three members, London association by three members, including one in Strathroy; Guelph association one member and Sarnia association one member. Individual members have been added: One in Galt, one in Listowel, one in Cobourg, one in Sturgeon Falls and one in Stouffville. Where possible we have made personal visits to the different towns and cities. Together with Mr. Mansell I have visited Ottawa, Strathroy, London and Peterboro, and with Mr. Harrison, the city of Owen Sound. I am glad to say that in all those places we were successful in organizing associations—in the case of London, re-organizing—except in the city of Ottawa, where, we regret to say, there does not exist a very healthy association.

The correspondence and work throughout the term has been somewhat heavy, but so far as the time would permit we have given close attention to all the matters that have come before us. Anything of very great importance I have brought before the Sub-Executive Committee, which will be found in the minutes of the meetings of that committee.

As this is the semi-annual meeting I will not mention anything about the receipts for the term, but will leave that for the treasurer, who, no doubt, will give you some idea of what the receipts have been. I may simply add that some associations which were considerably in arrears have very recently become clear on the books, and are now in good standing. There are a few on the books that do not seem to realize the importance of the association having money to operate it, and are evidently looking for something for nothing. We sometimes hear from these individuals if they

should happen to get into some trouble in their town, and, in the words of the Good Book, they "call upon us in the day of their trouble," and seem to forget us when their days are bright. I would suggest that any names of members who are more than one year in arrears and who do not between now and the first of the new year remit their dues, be removed from the list.

If we could only create a little feeling of confidence and good-fellowship one in the other, I believe that there is a very bright future ahead of the association. On the other hand, if the membership will persist in using unfair and questionable means to take advantage of their fellow craftsmen, our labors have been in vain, and we have accomplished but very little. I may say personally that I do not claim perfection, but it has always been my aim to elevate the craftsmen up to a true sense and conception of the business in which they are engaged; and while it has been a profession that has not received the respect due it from the outside public, it is none the less an honorable calling, and it is in our hands to elevate it to such a position that it will command even the respect of the public.

I trust that whatever our future may be, whether together or apart, that the association will be of incalculable benefit to the craftsmen with whom I have come in contact for so many years.

I could add to this report, but I fear if I make it any longer, that it will weary you, and I will content myself with bringing it to a close by wishing you success in the future.

These two reports were referred to a committee on resolutions, who reported at the afternoon session. This committee consisted of:

R. Ross, Toronto, chairman.
E. Russell, London.
C. Bull, St. Thomas.
W. Barrie, Sarnia.
A. Rogers, Hamilton.

Afternoon Session.

The Resolution Committee advised the adoption of the secretary's report with the exception of the clause regarding the time for the payment of dues. They recommended that the time be extended until February 1, 1905, and the report was adopted by the convention with that amendment. The Resolution Committee also recommended that the report of the Executive Committee, which had been referred to them, be adopted as a whole. This report went into the detail work of the committee during the past six months, and also suggested that the next annual convention of the provincial association be held in Guelph, at the request of the local association there, pro-

vided that place could be found on the map. Thereupon Mr. Mahoney, the jovial Irishman from that much abused city, rose in majestic silence and unfurled a map (drafted by himself) on which was unmistakably shown his native city. That point settled the report was adopted in full.

ORGANIZATION COMMITTEE.

The report of the Organization Committee was then read which went into the active work of this committee as set forth in part in both the president's and secretary's reports. The report was adopted by the convention, and a note of thanks tendered to the members of the committee. Mr. Wm. Mansell responded to this vote of thanks, giving a very large share of the credit due the committee for the work it had accomplished to Mr. W. H. Meredith, the secretary, who he thought was an indefatigable organization worker.

The most of the afternoon was taken up with the discussion of some slight changes in the existing by-laws of the association, which had been recommended in order to meet new conditions now existing, and also the detail of organization work in the local associations and in the provincial. It was decided to have a formal motion of amendment to the by-laws drawn up and presented to the secretary in time for the annual convention in the Spring.

Touching on organization work Mr. Meredith gave a rousing address. Action and perseverance was the soul of every sentence. He has had wide experience in organization work both in the Toronto and the provincial associations, and he was in a position to discuss this work in worthy style. He cited incidents to prove what persistency and dogged perseverance can do. He also discussed the general policy of the association. He claimed that the object of the association was not to drive non-members out of business; there was no need for that. The doors of the association were wide open for all plumbers who wished to enter, and not only were they invited but they were implored to come in. The object of the association was to raise the standard of work, and to do that there must be some restriction to the cutting of prices until a job could not be done properly for the price paid. He enlarged on the importance of keeping the standard of plumbing work on a high level, and he was sure that if the general public realized the situation

they would no longer look upon the Master Plumbers' Associations as gangs of robbers.

THE CONVENTION AT ST. LOUIS.

The visit of the delegates in the name of the National Association of Canada from the Toronto association to the convention of the National Plumbers Association of the United States held at St. Louis, recently, came up for discussion. This delegation consisted of Messrs. Robert Ross, F. Armstrong, W. H. Meredith and R. Harrison.

Mr. Ross told of the work done at St. Louis. He considered the money spent by the Toronto association in the sending of these delegates well spent. There had been established a connection with the National Association of the United States which will without doubt prove of great mutual benefit. There was no doubt that the Toronto association would be repaid, and when the Dominion association came in touch it would also derive the benefits.

Messrs. Armstrong, Meredith, Harrison and Mansell also spoke of the trip.

The annual meeting of the Ontario Provincial Association will be held at Guelph on Good Friday of 1905.

ORGANIZATION WORK.

Under the head of new business, organization work again came up for discussion, and Mr. Meredith again advocated persistency, and referred to Mr. Mahoney as an example of a persistent organizer. To his courage was due the organization of the local association at Guelph. He had not missed a single convention since conventions began to be held. Mr. Meredith went on to point out that if the greatest progress in the association was to be made, each member must aim to have plumbers in their city, town or district, who do not belong to the association, join it. The key note to success is to get all plumbers members of local associations and also members of the Provincial and Dominion Associations.

The afternoon session closed shortly after five o'clock, the delegates to reassemble at McConkey's at seven o'clock.

The delegates were unanimous in thinking that the convention had been a good one, and one which would bear good fruit in the future to the association. For a semi-annual convention the

attendance had been extraordinary, Mr. Meredith said, the previous ones being attended by not much over half the number of delegates present at this one.

THE DINNER.

The Toronto association had prepared a very informal dinner for the visiting delegates at McConkey's, and, gathered around the festive board, the plumbers prepared to enjoy themselves. The day's proceedings had been heavy, and the delegates considered that they had well earned the pleasures of the evening. Added to the delegates to the convention were several representatives of the manufacturers and supply men, among them being P. McMichael and Mr. Fullerton, Dominion Radiator Co.; J. R. Foster, James Robertson Mfg. Co., and F. J. Travers, Canada Radiator Co. At the head of the table were to be seen the toastmaster, Wm. Mansell, W. H. Meredith, Geo. H. Cooper, vice-president of the Toronto association; A. S. Purdy, S. Mellon, president of Hamilton association, and H. Mahoney, the organizer of the Guelph association.

The menu was choice, and full justice was done to the good things provided. As cigars circulated, presented by P. McMichael with compliments of the Dominion Radiator Co., the toastmaster rose to propose the toast to the "King." Before proposing the toast he commented on the good meeting they had had, and was certain that substantial results would be realized by the craft as a result. The toast to His Majesty was done honor to during the singing of the National Anthem.

The toast to the "Ontario Master Plumbers' Association" was proposed by Mr. W. H. Meredith and responded to by Ald. Wallace, of Hamilton. The next toast was to the "Manufacturing and Supply Houses," proposed by Mr. Wilson, of Toronto, and responded to by Messrs. Travers, McMichael and Foster.

The Toronto association was toasted by Mr. Mahoney, of Guelph, and responded to by Mr. George H. Cooper.

The toast to "The Ladies" was proposed by C. H. Beavis, and was responded to with becoming gallantry by Mr. Fullerton, of Dominion Radiator Co., and C. Rogers, Hamilton.

The most pleasant event of the evening was the presentation by President S. Mellon, on behalf of the Hamilton local association, of a very handsome leather easy chair, to Mr. W. H. Meredith, in recognition of his services in assisting the master plumbers of Hamilton to organize.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Hardware.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, Nov. 18, 1904.

WITHIN one day a marked change was effected in the wholesale hardware business from a condition approaching to dullness to one of briskness and activity. Not only has the Christmas trade started with a snap and a vim, but all general lines of hardware are meeting with a good demand. The rush that was expected last week before advance in freight rates, did not materialize. Considerable attention is now being paid to the demands of the holiday trade and it is generally hoped that the volume of business done from now until the first of the year will afford compensation for the earlier quietness.

Hockey sticks, pucks, skates, horse blankets, sleight bells, plated ware, cutlery and scissors are the leaders at present, while most lines are moving well. The lantern market is active, but considerable cutting is being done with no prospect of an early settlement. Owing to the advance in iron, bolts and nuts are stiffer, but no advance is reported. Cement, building paper and building hardware are quite active. Prices remain the same except in the case of lanterns which are quoted lower this week.

Hockey Sticks and Pucks—Although skating has not yet started it may be expected to commence any week, especially in the country districts and within a very few weeks the city rinks will be open. The demand for hockey sticks and pucks in the face of this situation has been quite large. Quotations are: Boys' hockey sticks, from \$1.50 a dozen up; men's, \$2.25 to \$3.50 a dozen; regulation pucks, \$2 a dozen; juvenile, \$1.15 a dozen.

Plated Ware—As the Christmas trade has commenced and plated ware is one of the most active lines, there is a big trade being done. We quote: Rogers' 1847 goods, 45 per cent. off list.

Cutlery and Scissors—Many orders are coming in for these every day, making

the season a good one. Quotations for case carvers from \$2 to \$10 per set; scissors in cases, 90c to \$2.

Skates—Although the country trade are already well stocked up with their season's supply of skates, the city trade is very active. We quote: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Axes—Axes are moving well and the wholesale trade report considerable business in this line. Our quotations are as follows: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—The demand is particularly strong, especially for axe and pick handles. Our quotations are as follows: Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3 \$1.50 a dozen.

Carpet Sweepers—The Christmas season is generally the best for carpet sweepers and this will prove no exception to the rule. Quotations are the same as before, \$21 to \$31 per dozen.

Sewing Machines—If anything, further sales have taken place in this market within the week, making it particularly strong and active. We quote: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Food Choppers—While sales have fallen off considerably for food choppers the demand is still more active than otherwise. We quote as follows: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Corn Cutters and Huskers—The usual season for an active demand in this line is now past, but there are still quite a few being sold. Our quotations are as follows: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to

\$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

Lanterns—The lantern situation has taken an unusual turn and wholesale cutting has been indulged in. The price has been lowered on Cold Blast and even the lower quoted price is shaded. We quote: Cold Blast, \$1 a dozen less than before; prices are Cold Blast, \$6; No. 0 Safety, \$4 a dozen.

Sleighbells—The bulk of country orders for these has already been placed, but city trade is seeing considerable activity and a large amount of orders coming in. We quote as follows: Brass team bells, rough, \$1.80 to \$4.50 a doz.; polished, \$2.10 to \$5 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—There is a very brisk feeling in this market. A few cold days last week and the slightest suggestion of a snow fall have stimulated the demand very much. We quote: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Heavy Screw Hooks and Hinges—Some sizes of these are scarce and an advance is likely to take place shortly in sympathy with the strong metal market. Our quotations are as follows: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—Little annealed wire is being called for just now. The demand for its use for hay pressing is over, as all hay shipments have been made. Quotations are as before, \$2.25 per hundred pounds.

Barb Wire—Little or no change is noted in the barb wire market. The demand is light, and scarcely any present, and few future shipment orders have been placed. We quote as follows: \$2.75

per 100 lbs, f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Car lots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—Trade in galvanized wire is very quiet. Our quotations are as follows: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—Very few being sold at present. We quote: \$2.65 per 100 lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—There has been considerable stock moving within the past week. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—A few sizes are still reported somewhat scarce, but on the whole the supply is fairly good. There is a fair demand with no change whatever in price. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—A large stock of bolts and nuts is moving at present. Manufacturers have made no advance as yet, but it is anticipated that within the very near future prices will be increased. Already in the United States an advance of 5 per cent has been made. We quote as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; black bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—No readjustment has taken place in the wire nail situation. The wire nail manufacturers meet in Toronto on November 22 to discuss matters connected with the wire nail trade. Cutting still continues and as before we are not in a position to quote prices, owing to the variety of prices current.

Cut Nails—Quietness prevails in the cut nail market and it is expected from now on that shipments will be small and orders few. Quotations remain unchanged. Some sizes are still scarce. We quote as before, \$2.30 per keg, f.o. b. Montreal, Toronto, Hamilton, St. John.

Horseshoes—A large trade has been done recently in horseshoes and the demand has kept up in a remarkable degree. Heavy shipments were made to allow delivery to be made before the rates advanced. Our quotations are as follows: "P. B." new pattern, base price \$3.50 per 100 lbs; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—An active market continues. We quote list price as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22s; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. "P.B." brand, 55 and 60 per cent. off list. Other brands, 55 and 60 per cent. off list.

Sporting Goods—The demand for shot guns and rifles has fallen off almost altogether although a few stray orders are still being received. Ammunition and shot, however, are in better demand. Prices on shot guns and rifles remain the same and are to be had on application. On ammunition and shot our quotations are: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand. Standard shot \$6.50 per hundred pounds; chilled, \$7 per 100 lbs.; buck and seal \$7.50 per 100 lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b.

Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—Manufacturers and jobbers report the volume of business in building paper to have been very satisfactory within the past week. The clear weather has enabled building operations to continue, allowing of a good demand. Our quotations are as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—Business in cordage is rather quiet. The hemp market has been marked by several advances recently of a considerable amount and the price for raw material at present is high. No advance has been made in the quoted price of the finished material, but the market continues stiff and an advance may be looked for before Spring. We quote: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c, for 3 and 4-ply bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement and Firebrick—Last week saw the business in cement and firebrick pick up very materially and this week finds a continuation of that activity. Dealers are satisfied with the volume of business being done. We quote as follows: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—Very little stock is moving and the market is weak. Our quotations are as follows: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3, one inch, \$2.95.

METALS.

The strength and upward tendency associated with the metal market recently still continues and is further marked by numerous advances. Different from a week ago there is a much more active feeling and more stock moving. There have been material advances in nearly all lines, including bar iron, merchant steel, sheet zinc, ingot tin,

ingot copper, ingot zinc and pig lead, while the very great increase in antimony is one of the features of the market. In scrap metals the situation has improved considerably. Prices are firmer and a bigger demand now than for some time past.

Pig Iron—Import stock orders are now all in. Local stocks are moving well. The market is firm with no advance reported this week. Quotations are:

"Disc." No. 1.....	\$16.50 delivered Montreal.
"Dom." No. 1.....	17.50
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50
" No. 3.....	16.50
" No. 4.....	16.00
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50
Glengarnock.....	20.00
Gartsherrie.....	19.25
Carnbroe.....	18.50
Carron No. 1.....	19.50 delivered Montreal.
(special).....	18.50
Ayresome No. 1.....	18.00
" No. 3.....	17.50
Clarence No. 1.....	17.00
" No. 3.....	16.50
No. 1 Cleveland.....	17.00

Bar Iron—Manufacturers have raised the price of bar iron five cents a hundred. The mills are very busy keeping up with the heavy demand. There is still a shortage in some sizes. Our quotations are as follows: Merchants' bar, \$1.77 1-2; horseshoe iron, \$2.02 1-2; forged iron, \$2.02 1-2, net cash thirty days.

Tool Steel—The demand is hardly as brisk and there is little change from a week ago. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 71-4c; Conqueror High Speed steel, 60c.

Merchant Steel—Merchant steel has advanced 5c and the demand is good. Our quotations are: Sleighshoe, \$1.82 1-2; tire, \$1.92 1-2; spring, \$2.75; toecalk, \$2.42 1-2; machinery (iron finish), \$2.02 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.82 1-2; rivet, \$1.82 1-2; net cash thirty days.

Cold Rolled Shafting—No change is noted in this market. The demand is fair and continues without any disposition to change. Quotations are: Cold rolled shafting, 3-4 in., to 17-16, \$3.85 per hundred lbs; inch and a half to 3 inch, \$3.50 per hundred lbs.

Canada Plates—Although considerable advances were noted in Canada plates in the primary market last week, no change was noted and the situation remains the same. Stocks are now in and the demand is good. We quote: 52s.

\$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—There is considerable stock moving with no new features. Quotations as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge \$2.30.

Galvanized Iron—There is less stock moving and the market is quieter. As noted last week, orders are already being placed for Spring delivery at an advance of from 5s to 10s a ton. Our quotations are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Antimony—A startling advance took place in antimony this week in primary quarters which has considerably affected the local market. It was no less than an advance of £6 per ton. Quotations are 8c to 81-2c a pound.

Sheet Zinc—It was noted last week that further advance of 10s a ton had taken place in the primary market. We quote higher prices this week. Case lots, \$6.50 to \$6.75, and small quantities \$6.75 to \$7.

Tin Plates—These continue firm, but less activity is noted. We quote as before: Cokes, \$3.75; charcoal, \$4.

Ingot Tin—Ingot tin has been steadily advancing recently, and further advance is noted this week. There is considerable stock moving. We quote: 32 to 32 1-2c.

Ingot Zinc—Following the rise in the has taken place in ingot copper within the week, amounting to 3-4 of a cent a pound. We quote 15 1-2 to 15 3-4c, the former price being for quantities only.

Ingot Zinc—Following the rise in the primary market we quote an advanced price in ingot zinc this week of 1-4c a pound. Quotations are 61-4 to 61-2c, the former price being firmly held and for quantities only.

Pig Lead—It was thought some time ago that pig lead had reached its high-point, but such was unfounded as ad-

vances continue to be made, the price being higher now than it has been for a long time. We quote: \$3.50 to \$3.60, no concessions being obtainable on the former price.

Scrap Metal and Old Material—This market continues to gather strength and prices still rise. There is more activity apparent and considerably more stock moving. Rags are scarce and the demand is very good, particularly in the English market. Rubber has not advanced and there is little being sold. Our quotations are as follows: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 2 1-4c; zinc, 2 3-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 5 1-2c.

ONTARIO MARKETS.

Hardware.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Nov. 18, 1904.

THE conditions on this market are much the same as last week.

There have been no changes in prices with the exception of an advance of 2c for clothespins in 5 gross cases. There may be another change next week, either upward or downward. The Summer rates have now closed, but that does not seem to have affected the volume of trade. All houses report a good substantial amount of business. Of course one of the features of the market is the demand for Winter goods, including sporting goods, sleigh bells, etc. The meeting of the Wholesale Hardwaremen's Association last week did not result in any change of prices. The wire nail situation still remains in its unsatisfactory state.

Lawn Mowers—The trade is interested and orders are already coming in. Prices for 1905 are as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discount 50 per cent. with freight concessions in quantity shipments.

Guns and Ammunition—There is still a good demand for shot guns and am-

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.

FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.

SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required: Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND.

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Prices to Sales Agents

Drummond McCall & Co.

MONTREAL, QUE.

or to

Canada Iron Furnace Co.

MIDLAND, ONT

Limited

We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

munition, but there is a slight falling off in the demand for rifles. The deer hunting season has commenced, and rifles for that purpose have been nearly all sold.

Washing Machines—Our quotations are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$26; New Century, \$72; Capital, \$42; Magic, \$25; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Chain—We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Clothes Reels—The Davis (W. L. Co.), 40 per cent. off list.

Barb Wire—Orders for delivery in the future are coming in well. We quote \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—Some business is doing with prices steady as below: No. 5, \$3.45; Nos. 6, 7, and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Inquiries continue regarding prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—There is no change in the situation on this market. Cutting of prices continues unchecked and prices quoted are merely nominal. A seemingly fair quotation is about \$2.25 per keg f.o.b., Toronto, with carlots at \$2.20.

Cut Nails—There is still a fair business doing though prices are comparatively firm. We quote: \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Prices are as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and

IRON STEEL and METALS

Close prices to wholesale buyers only.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

COLD WEATHER IS COMING.

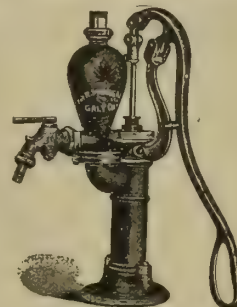
Have you got a line of good Pumps?
If not, you'd better write us about our

STANDARD ANTI-FREEZING PUMP

It's the best there is, and can't freeze if the valve is tripped by raising the handle. It's very simple, and the sale of one should bring you lots of other good business.

Catalog and prices for the asking.

The
R. McDougall Co.
Limited
Galt, Ont.



"ALPHA" HIGH SPEED STEEL Crucible Cast Steel

for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

SHEFFIELD, ENG.

Agents for Ontario:

BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are "C" brands, 40, 10 and 71-2 per cent.; "P.B." brands, 55 to 57 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—The large volume of business keeps up. Prices are firm. We quote Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—There is a good trade being done, with prices firm at last week's quotations. We quote as follows: Iron rivets, 60 and 10 per cent. discount; iron burrs, 55 per cent.; copper rivets with usual proportion of burrs, 45 per cent.

Bolts and Nuts—There is a good volume of business being done. Prices are steady. Our quotations are as follows: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Woodenware—There has been an advance in clothes pins of 2c for 5 gross cases. It is thought that there will be further changes in the price of clothes pins next week, either up or down. We quote as follows: Tubs, No. 0, \$11.25; No. 1, \$9; No. 2, \$8; No. 3, \$7; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 62c; 4 dozen packages (12 to case), 75c 6 dozen packages (12 to case), 95c.

Cordage—Business is being well booked up for rope and the jobbers are preparing for the binder twine trade for next season. Our quotations are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sashcord, "Hercules," 30 to 32c; "Star," 36 to 38c; cot-

DON'T BE IN A HURRY

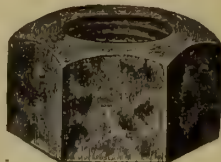
placing your orders for the season of 1905 for

TUBULAR LANTERNS

("Await The Light of Other Days.")

We shall have new goods and interesting prices to offer early in the year.

ONTARIO LANTERN AND LAMP CO., Limited, HAMILTON
WALTER GROSE, Selling Agent, MONTREAL.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs, Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.

SPECIALTIES FROM THE GREEN BOOK.

No. 5—Glass Cutter—Magazine contains 6 extra disc wheels; best made.

No. 723—Connector—Black or polished, for Nos. 6 to 14 iron wire, and 4 to 14 copper wire.

Send for Specialty section of the "Green Book of Hardware Specialties."

SMITH & HEMENWAY CO. Mfrs. of Cutlery and Hardware Specialties.
294 BROADWAY, NEW YORK CITY.

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GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, Montreal.

Brand Galvanized Sheets

People who use this brand find there is none better and they particularly like its low price. Give it a trial. Every sheet is guaranteed.

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.

: : : : TACKS : : : :

When ready to order Tacks, write me. I manufacture and sell direct to the retail trade. Price better on that account.

T. H. WYNN, TACK MNFR., HAMILTON

ton rope, 3-16 inch and up, 20 1-2c to 22c; 5-32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 63-4c; white, 11 to 13c.

Firebrick—The demand has increased, owing to an extensive amount of repair work being done. Prices continue un-

changed. Our quotations are as follows: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Cement—The demand is gradually growing quieter. Prices remain the same. Our quotations are as follows: Canadian Portland, \$1.70 to \$2.00; English \$2.15 to \$2.25; Belgian, \$1.90 to \$2 ex

store; American Portland, \$1.70 to \$2.00 f.o.b. Toronto

Building Paper—Owing to extensive operations in the building trade, the demand continues strong. Prices continue unchanged and will likely do so for some weeks. Our quotations are as follows: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slater's felt, 60c per roll.

METALS.

There is no particular change in conditions on this market. The market continues quite firm and very active in all lines. Copper on the New York market is still on the advance and that tends to give the local market an upward tendency. There has been no further advance so far, but it is possible that there may be before long. Pig iron in England and on the American markets is somewhat steadier, thus leaving the local market firm and fairly steady. As was stated last week Canadian pig iron is scarce, Midland being all sold up to the beginning of the year. Buyers are placing orders quite freely for delivery at the beginning of the year. The tin market continues firm and active.

Pig Iron—Pig iron is fairly steady now, the English market having steadied up, and also the American markets. Buying is going on quite freely for delivery next year. Midland iron is sold up to the beginning of the new year, and therefore cannot be had for immediate delivery. We quote as follows:

Middleboro, f.o.b., Toronto.....	\$18 90
Hamilton, No. 1	\$18 00 to 18 25
" No. 2	17 50 to 17 75
" No. 1, Hamilton	17 00 to 17 50
Midland, No. 1	17 00 to 18 00
" No. 2	17 00 to 17 50
" No. 1 f.o.b. Midland.....	16 25 to 16 75
Radnor, f.o.b. furnaces.....	27 70
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—There is an active movement, with prices firm as follows: \$1.80 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tool Steel—We quote as follows: B. K. Morton & Co.'s "Alpha," high speed, 65c; "M" self-hardening, 50c; Standard, 9c to 14c; Jonas & Colver's "Novo," 65c; Wm. Jessop & Son's high speed, 60c; Standard, 14c; "Chas.

Leonard," 8 to 9c; Crucible Steel Co.'s "Rex," high speed, 65 to 75c; self-hardening, 45 to 50c; special, 17c; Black Diamond, 10 to 11c; Sanderson's crucible steel, 8 to 9c; Superior, 12 to 13c. For more complete list see market quotations.

Tin—Is firm on foreign markets, and the local market responds. There has been no further advance in England since last issue. A very good trade is being done. Quotations are 31 to 32c per lb.

Galvanized Sheets—Prices are firm. A good business keeps up at the prices noted. Our quotations are as follows: Queen's Head, \$4.00 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.00 for 28 gauge; Gordon Crown, \$4 for 28 gauge.

Tin Plates—An excellent demand continues, with prices steady. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.40; half-polished, \$2.50; and all-bright, \$3.30.

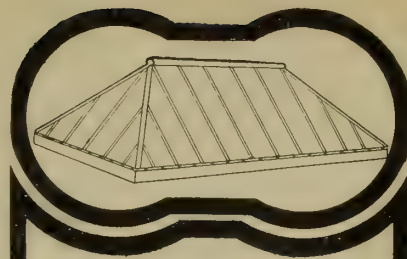
Copper—This market shows no advance this week. There is, however, an upward tendency on foreign markets and consequently the local market is very firm, with the probability of an advance soon. Quotations are as follows: Ingot copper, \$14.75 to \$15 per 100 lbs; sheet copper, \$20 per 100 lbs.

Brass—This market is active, with steady quotations. Discounts are 15 per cent.

Lead—The market continues firm at recently advanced quotations. There is a good business being done. Quotations are as follows: Pig lead, \$3.40 to \$3.60 per 100 lbs; and bar lead \$3.60 per 100 lbs.

Spelter—Market remains firm at advanced quotations. Prices are from 53-4 to 6c per lb.

Old Material—All prices on brass and copper scrap have advanced 1-2c. Lead, zinc and machinery cast scrap have also advanced. The market is brighter, everything is moving more freely and indications point to a brisk trade. We quote: Heavy copper and wire, 11 1-2c per lb; light copper, 10 1-2c per lb; heavy red brass, 10c per lb; heavy yellow brass, 73-4 to 8c per lb; light brass, 51-2 to 6c per lb; tea lead, \$2.35 per 100 lbs; Heavy copper and wire, 11 1-2c per lb; 33-4c per lb; iron, No. 1 wrought, \$9; No. 2 wrought, \$2; machinery cast scrap, \$12.50 to \$13; stoveplate, \$8 to \$9; malle-



Metallic Skylights

The acme of Skylight perfection!

We make them from hollow bars of Copper or Galvanized Steel—in styles and sizes to suit all kinds of roofs.

They are very strong, and unaffected by cold or heat, as there is neither contraction nor expansion—and, if glazed with our fire-proof wired glass, they are absolutely fire-proof.

METALLIC ROOFING CO.,
Limited,
Wholesale Manufacturers,
TORONTO, CANADA.

able and steel, \$4; old rubbers, 5 1-4c; per lb; country mixed rags, 65c per 100 lbs.

Coal—The cool weather has caused a brisk demand. Large supplies are going north, where a larger percentage of coal stoves are being used as wood is becoming scarce. We quote: Anthracite in cars at Bridges: Grate, \$5.25 per gross ton; egg, stove and nut, \$5.50 per gross ton; pea, \$3.75 per gross ton.

PERSONAL MENTION.

On Friday, November 4, Mr. John H. Bertram, of the firm of John Bertram & Sons, Toronto, was united in marriage to Miss Ruby Delphene, of Grimsby.

The agents of the Massey-Harris Co., who assembled in Toronto on November 11, to give a send-off to Mr. Neil McKellar, held a banquet at the Queen's hotel in the evening. They had a most pleasant time, impromptu speeches, songs, etc., helping to enliven the proceedings. Mr. McKellar has gone to Chatham.

Mr. George J. Rogers, vice-president of the Rogers Co., Limited, of Charlottetown, P.E.I., called at the Montreal office of Hardware and Metal this week. Mr. Rogers reports that the hardware business has been unusually good in this province this year. We regret to state that he is not enjoying the best of health but expects that with the coming Winter spent at Saranac Lake he will be completely restored.

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL
Room 515 McIntyre Block,
Winnipeg, Nov. 14, 1904.

NOW that threshing operations are practically finished for this year the many thousands of harvest hands have turned their faces eastward, and each train that passes through Winnipeg from the golden west is crowded with the laborers who have helped thresh the great crop of 1904. Trade for the past few weeks has been very bright and active and collections are now showing up to a better advantage.

All markets are fairly firm with little or no particular change in the price list of any note. We quote:

Barbed wire, 100 lb.....	\$2 75
Plain galvanized.....6 to 8	3 39
Plain galvanized.....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 30
".....15	4 45
".....16	4 60
Plain twist.....	2 75
Staples.....	3 25
Oiled annealed wire.....10	2 96
".....11	3 02
".....12	3 10
".....13	3 20
".....14	3 30
".....15	3 45
Annealed wires (uncoiled) 100. less.	
Horseshoes, iron, No. 0 to No 1.....	\$4 75
No. 2 and larger.....	4 45

Snow shoes, No. 0 to No. 1.....	4 20
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Horsenails, No. 4-1 1/2 in., list price.....	0 48
" 5-2 " " ".....	0 32
" 6-2 1/2 " " ".....	0 28
" 7-2 1/2 " " ".....	0 24
" 8-2 3/8 " " ".....	0 22
" 9-2 1/2 " " ".....	0 20
" 10-2 1/2 " " ".....	0 20
" 11-2 1/2 " " ".....	0 20
" 12-2 1/2 " " ".....	0 20
" 14-3 1/2 " " ".....	0 20

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

Cut Nails—

2d x in.....	\$4 00
3d Fin. 1 1/2 in.....	4 00
3d 1 1/2 in.....	3 65
4d 1 1/2 in.....	3 40
5d 1 1/2 in.....	3 40
6d 2 in.....	3 30
8d 2 1/2 in.....	3 15
10d 3 in.....	3 10
20d 4 in.....	3 05
30d 4 1/2 in.....	3 00
40d 5 in.....	3 00
50d 5 1/2 in.....	3 00
60d 6 in.....	3 00

Wire Nails—

x in.....	4 00
1 1/2 in.....	4 00
1 1/2 ".....	3 65
1 1/2 ".....	3 40
1 1/2 ".....	3 40
2 ".....	3 30
2 1/2 ".....	3 15
3 ".....	3 10
3 1/2 ".....	3 05
4 ".....	3 05
4 1/2 ".....	3 00
5 ".....	3 00
5 1/2 ".....	3 00
6 ".....	3 00

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 65
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.....	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10

Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American.....	4 25
28 gauge.....	4 50
30 gauge or 10 1/2 oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.....	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Extra sheets, 36 in. wide, an advance of 25 p.c. per 100 lb.....	

Genuine Russian, per lb.....	11
Imitation ".....	07 to 08

Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05

Tinplate, IC charcoal, 20 x 28, box.....	9 50
IX.....	11 50
IXX.....	13 50

Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.....	3 00

Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	7 50
Broken lots.....	8 00

Pig lead, 100 lb.....	5 00
Black iron pipe, 1/2 inch.....	

" 3/4 ".....	2 82
" 1 ".....	3 80

Black iron pipe, 1/2 inch.....	4 20
" 1 ".....	5 25

" 1 1/2 ".....	8 50
" 2 ".....	10 00

Rope, sisal, 7-16 and larger, basis.....	10 75
Manila, 7-16 and larger, basis.....	15 25

Lathyrum.....	11 25
Solder.....	20

Axes, chopping.....	\$ 6 75 to 12 00
" double bits.....	12 00 to 18 00

Bluestone.....	5 25
Screws, flat head, iron, bright.....	85 and 10 p.c.

Round ".....	80 p.c.
Flat " brass.....	75 and 10 p.c.

Round ".....	70 and 10 p.c.
Coach.....	70 p.c.

Bolts, carriage, 3/4 or smaller.....	60 and 5 p.c.
" 7-16 and up.....	55 p.c.

Bolts, machine, 3/4 and under.....	55 and 5 p.c.
" 7-16 and over.....	55 p.c.

Bolts, tire.....	60 and 5 p.c.
Bolt ends.....	55 and 5 p.c.

Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.

Plough bolts.....	55 and 5 p.c.
Square nuts, case lots.....	3c. discount.

" small lots.....	2 1/2 c.
Hex " case lots.....	3c.

" smaller lots.....	2 1/2 c.
Rivets, iron.....	50 and 10 p.c.

Copper, No. 8.....	32
No. 12.....	36

Coil chain, 3-16 inch.....	9 1/2
" 1/2 inch.....	7 1/2

" 5-16 inch.....	5 1/2
" 3/4 inch.....	5 1/2

" 7-16 inch.....	4 1/2
" 1/2 inch.....	4 1/2

" 3/4 and 1/2 inch.....	4
Spades and shovels.....	40 and 5 p.c.

Harvest tools.....	60 p.c.
Axe handles, turned, s.g. hickory, doz.....	\$3 15

No. 1.....	1 90
No. 2.....	1 60

Octagon extra.....	2 30
No. 1.....	1 60

Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.

Building paper:	
Anchor, plain.....	65c.

" tarred.....	70c.
Pure fibre, plain.....	67 1/2 c.

" tarred.....	80c.
Ammunition, cartridges, Dominion R.F.....	50 p.c.

Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.

Ammunition, cartridges, American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.

C.F. military.....	10 p.c. advance.
Loaded shells:	

Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00

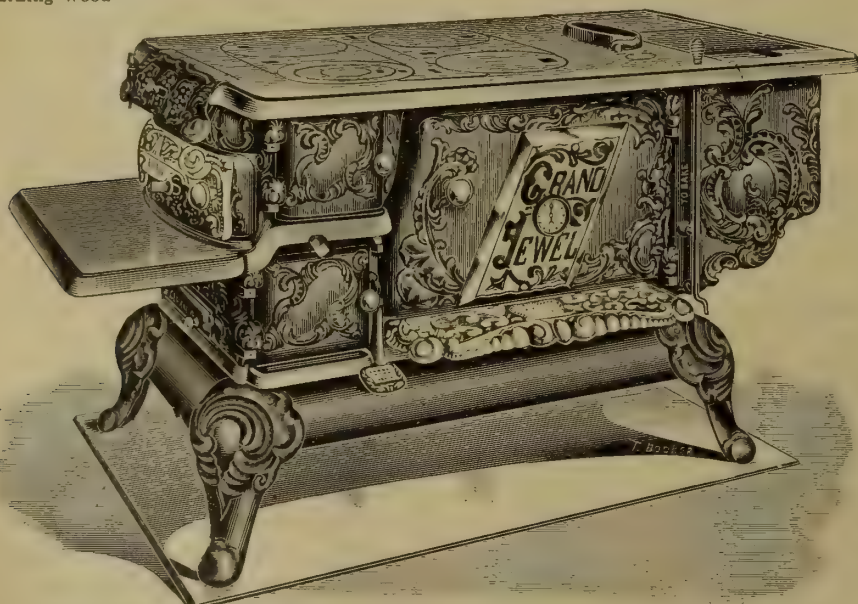
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00

Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 55

Powder, F.F., keg.....	4 70
F.F.G.....	5 00

The Grand Jewel Coal Cook Stove

s a new stove of the very highest class, specially adapted for burning Hard or Soft Coal; can also be used or burning Wood



Two Sizes—Square

Duplex Grate of improved pattern. No space left between grate and fire-box lining, so that no ashes or cinders can pass between or accumulate, so as to interfere with its easy working. One movement of the crank cuts out the dead ashes and cinders and drops them into ash pan.

The Duplex Grate when reversed forms a perfect WOOD fire bottom, and with all the coal linings in position 17 inch wood can be used. Special Wood Linings can be supplied to admit wood 24 inches long.

Two Sizes—with Tank

The Oven is our standard one piece Sheet Steel Oven, same as our Grand Jewel Wood Cook, which has been so wonderfully popular and successful. This Oven will never warp nor crack. With a Steel Oven much less fuel is expended in getting up a baking heat, and less required to keep the stove running.

The Oven is well ventilated.

Oven Door Thermometer.

Water Front for either size supplied when ordered.

Manitoba
Depot

MERRICK, ANDERSON & CO.,

Winnipeg

Tinware, pressed, retinned.	70 and 10 p.c.
" " plain.....	75 and 2½ p.c.
" " pieced.....	
Japanned ware.....	37½ p.c.
Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American.....	27½ c.
Prime white American.....	25½ c.
Water white Canadian.....	25½ c.
Prime white Canadian.....	24½ c.

SCRAP.

No. 1 cast iron.....	\$14 to 15
No. 2 ".....	7
Wrought iron scrap.....	5
Copper (heavy).....	8½ c. per lb.
Yellow brass (heavy).....	7½ c.
Light brass.....	5c. to 6c.
Lead pipe, or tea lead.....	2c. to 2½ c.
Zinc scrap.....	1c.

PAINTS, OILS AND GLASS.

White lead.....	\$5 00 to \$5 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½
Turpentine, pure, in barrels.....	\$ 0 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
Boiled.....	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.75; 26 to 40, \$4.00; 41 to 50, \$4.50; 51 to 60, \$5.00; 61 to 70, \$5.50, in 100-ft. boxes.

Lubricating oils, heavy castor machine....	0 29
" " extra engine.....	0 27
" " dynamo.....	0 35
" " black.....	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	

Harness oil.....	0 50 to 0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00½
" " 2nd pressure.....	1 09½

NOTES.

All outside work on the Winnipeg Paint and Glass Co.'s new warehouse at Winnipeg is practically finished and this beautiful and massive edifice of seven storeys makes a very prominent appearance.

Mr. T. M. Kirkwood, formerly of Toronto, Ont., is now erecting at Winnipeg an iron and steel rolling mills, costing in the neighborhood of \$40,000. The site selected for this enterprise is at the corner of Logan and Gallagher avenues upon which a building entirely composed of steel will be erected. Seven earloads of most modern machinery necessary for the work is being shipped from New York and Pittsburg.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of *HARDWARE AND METAL*.

Vancouver, B.C., Nov. 11, 1904.

TWO important visitors to Vancouver this week were MM. Eugene P. Poisson and E. Parrott, engineers, of Paris, France, who represent La Campagnie de Fives Lille, of France, and are traveling in Canada to take note of the resources and of the opportunities of investment. They have paid particular attention to minerals, railways, canals, bridges, docks, and all kinds of public works. While in Van-

couver they stated that there are millions of money in France for investment in legitimate enterprises, and as Canada was exciting considerable attention in Europe, it was very probable that some of this money would be expended in the Dominion. They expressed themselves as very much pleased with what they saw while crossing the continent, and said this visit would not be their last.

Mining is still looking up. J. D. Sibbald, formerly of Regina, and now of the Revelstoke, McCullough Creek Mining Company, has just returned from a trip to New York and other eastern cities, and states that development of the company's resources will now proceed on a large scale. There were immense possibilities before it, they having an extensive gold placer proposition. Results have been very promising.

An American company has also taken up an old drift in French creek, near Revelstoke, and are putting in a working staff of 15 men.

American capitalists have invested \$100,000 in the Nahmint mine on Alberni canal, west coast of Vancouver island, which property formerly belonged to Victorians. Those interested are greatly pleased with the prospect, and if the mine turns out as well as expected, it will boom the industry in that part of the province.

The Britannia mines, near Vancouver, are to be developed very shortly on a large scale. An extraordinary general meeting of the Britannia Copper Syndicate will be held next Tuesday to increase the capital from \$250,000 to \$625,000, the par value of the shares being \$625. Four hundred of the shares will be underwritten by Col. Henry T. Stern, who has been in Vancouver during the past couple of weeks. The increase of capital is to provide the money for the carrying out of the plan of extension already outlined.

One of the biggest mining enterprises ever undertaken in Alaska or the Yukon basin has been inaugurated in the famous old Forty-Mile country on Chicken creek. Six miles of the creek and its principal tributaries have been grouped for the purpose of being worked by hydraulics, and it is estimated that half a million dollars will be required to swing the proposition.

For the handling of the coal mined at Forty-Mile, the Dawson Electric Light and Power Company will erect bunkers, to cost from \$12,000 to \$15,000.

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Mr. Charles Dorey, of Thurlow island, a short distance from Vancouver, claims to have re-discovered the lost art of tempering copper to the hardness of steel. He has been experimenting at his place, and was in Vancouver this

week. He is willing to temper any piece of copper given him, and next time he comes down will bring samples of work already executed. It is unnecessary to mention even the importance of such a discovery if Mr. Dorey's claims are substantiated.

• • •

No changes in staple lines are reported locally. Though paint, oil and glass are said to have increased in the eastern market, no alteration has taken place here in the prices.

The Kamloops Lumber Company, of which George McCormick, formerly of Orillia, is president, has decided to rebuild its mill, the new plant to have double the capacity of the old. The cost will be at least \$75,000, and the output 20,000,000 feet per annum. The waterous machinery will doubtless be installed. Ontario and New Brunswick capital is behind the enterprise.

A. G. Mosle, of the Japanese Government Secret Service, who spent some time in Victoria this Summer, was so imatuated with the rubber-tired vehicles which he saw, that he purchased a set and sent them to Japan, where he will use them. He says that article should obtain great favor in Japan. He also purchased a \$500 roadster.

The Pacific Coast Pipe Company, of this city, has received a contract from the Trail smelter for over two miles of 16-inch wooden stave pipe. It is to be used in the new waterworks system.

Captains G. H. French and C. E. Robertson, of this city, have laid the keel of an ocean-going tug, which will cost \$56,000, and be the best in local waters. Her length will be 127 feet, beam 23, depth 14.6. The boiler will be Scotch marine, 12 feet in diameter, 11 feet long, and her engines triple expansion, 12 x 20 x 32, 24-inch stroke.

Vancouver is growing so rapidly that another extension to the waterworks system must be made soon. Two years ago large additions were planned, and it was thought at that time that it would do for some years, extensions being planned ahead. Now, it is suggested to ask the ratepayers to vote another \$100,000, or, perhaps, more. The waterworks are municipally owned, and there is a large surplus every year.

M. Amyata, foreman in the great gun foundries and ammunition works of the Japanese Government at Osaka, came to Vancouver on the Athenian last Saturday, and left for Bethlehem and Pittsburg, Pa., in connection with supplies of special ammunition, and small arms, and harveyized plate.

The coal output for Klondike mines for the year just ended will aggregate 6,000 tons. Over \$50,000 has been expended this season at the mines for permanent improvements.

Mr. R. D. Fetherstonhaugh, of Atlin,

a well-known mining man, who was in Vancouver last week, has left for Marion, Indiana, where he will place an order for two steam shovels, which will be operated in the north next year.

NOVA SCOTIA MARKETS.

Halifax, N.S., Nov. 12, 1904.

TRADE in hardware was active throughout the month of October, but fell off largely during the first week of the present month. This was probably caused by the elections, as in the last four or five days good orders have again been coming forward. There has been great activity in the shipping departments in the last few days, as jobbers are rushing their deliveries before the Winter freight rates come into effect on the 15th of the month. The Halifax and Southwestern Railway is now accepting freight between Halifax and Lunenburg, although no regular trains are yet running over the road. Construction trains are running further down the shore to Liverpool, and it will not be a great while before all that section of the province will have railway connection with Halifax, which will bring additional trade in this direction.

• • •

A feature of Fall trade has been the big demand for guns and ammunition, and while the heaviest season is now over, a good deal of ammunition is still called for. Owing to the reduction in price retailers have been able to sell guns at what was formerly the wholesale price, and the result was that a great number were sold, and there was a better demand for ammunition in consequence.

• • •

The most important feature just now is the state of the glass market. The trade here about this time of the year usually place their orders for about all the glass they expect to require to arrive by direct steamers from Antwerp in the early Spring. This year, on account of the Belgian strike, this source of supply was closed, and when they turned to the British market, they were met by advances of from 30 to 40 per cent. over the usual prices. In the opinion of importers, conditions will not be more favorable at least for six or nine months, and retailers will probably have to pay an advance of about 40 per cent. for what glass they require in the meantime.

* * *

Zinc on the local market has been advanced, and is now selling in casks at 7c., and for lesser quantities 7½c. All metals are firmer and show an advancing tendency.

The trade in cordage is beginning to pick up. The lobster season west of Halifax opens on the 15th of December, and the fishermen are commencing to make their usual preparations.

* * *

There have been a couple of changes in wholesale hardware firms here. Mr. E. F. Stevens, who for many years had an active part in the business of Wm. Stairs, Son & Morrow, has retired. Mr. R. H. Neal has retired from the firm of George E. Smith & Co. and has accepted a position with A. J. Grant & Company. He will probably go on the road.

Black Bros. & Co., Limited, who have been in the wholesale hardware business here for a century, have decided to abandon their connection and devote their whole energy and capital to pushing their Halifax and Acadia package fish, which they are putting up for the grocery trade. This decision was hastened by the recent fire, which destroyed their hardware stock and warehouse.

There are still ten wholesale hardware houses in the city, namely: Crowell Bros., Douglas, Prowse & Co., A. J. Grant & Co., A. M. Bell & Co., H. H. Fuller & Co., Cragg Bros. & Co., Geo. E. Smith & Co., W. B. Arthur, Wm. Robertson & Son, and Wm. Stairs, Son & Morrow. Across the harbor in Dartmouth is the firm of James Simmonds & Company, whose travelers cover the province. In the city proper, in addition to the above, the firm of Austen Brothers do a very extensive business in mill and lumbermen's supplies, while there are a couple of others which make a specialty of electrical goods.

CANADA'S IMPORT OF STEEL RAILS FROM U. S.

During the month of September Canada imported from United States, according to their own statistics, 44,706 gross tons of steel rails, or considerably more than double the quantity imported in any immediately preceding month, and four-fifths as much as were imported in the whole first half of this year.

STOCK RESOLD.

The stock of the John Bowman Hardware & Coal Co., London, which was purchased by Mr. William Bowman for 70c on the dollar, has been re-sold to the D. Howden Co., of London. Hardware and Metal has been informed the price paid by the D. Howden Co. was 80c on the dollar.

PERSONAL.

There are few, if any, more popular men in the wholesale hardware business than Mr. J. P. Seybold, senior member

of the wholesale hardware firm of Seybold Sons Co., Montreal. It is gratifying to know that Mr. Seybold has almost completely recovered from his serious illness and expects to be removed from the Royal Victoria Hospital to his home in Weredale Park very shortly. Mr. Seybold has been visited by a number of the wholesale trade, including Mr. W. H. Newman, of Caverhill, Leamington & Co.; Mr. Robt. Starke, of Starke Hardware Co.; Mr. A. A. Brown, of McClary Mfg. Co., and Mr. W. H. Evans, of the Canada Paint Co.

BUILDING NOTES.

A new bridge is to be built at Forester's Falls near Egansville.

A large hotel is being built in Calgary, which will cost \$150,000.

Mr. Warren, Kemptville, is going to build a new hotel costing \$14,000.

A bridge is being built at Battleford for the Canadian Northern Railway.

The town of Ladysmith, B.C., have decided to build a new City Hall and fire hall combined.

Nagle & Mills, Ingersoll, have received the contract for erecting the new armory at Woodstock, Ont.

The Record Foundry and Machine Co., Moncton, N.B., have erected a new power station at their works.

The Ontario Lantern and Lamp Co., Hamilton, have rebuilt that portion of their building destroyed by fire.

There is a rumor afloat to the effect that a Syracuse party of financiers intend to build a factory in Lewiston.

B. Loomis & Son, Montreal, have received the contract for the erection of a new \$600,000 post-office in St. John, N.B.

Negotiations are under way for the erection of a large saw and planing mill by Small & Bucklin, New Westminster, B.C.

The Blonde Co., Chatham, have the contract for erecting a new Roman Catholic church at Stoney Point, near Leamington, costing in the neighborhood of \$25,000.

C. J. B. Simmons has received the contract for erecting a new drill hall at Fredericton, N.B. The new structure will be of brick and will cost \$13,000.

Rhodes, Curry & Co., of Amherst, N.S., have received the contracts for erecting a railway station at Antigonish at a cost of \$12,000 and a similar station at Picton at a cost of \$40,000.

1905 ANNOUNCEMENT.

Our travellers are on the road with samples for 1905.
Wait for our prices before contracting for

Tires, Inner Tubes and Bicycle Sundries

JOHN MILLEN & SONS, MONTREAL and TORONTO

Business Changes

ONTARIO.

JARVO & CO., hardware merchants, Cornwall, have called for a meeting of their creditors on November 19.

Wm. G. Field, pump manufacturer, Guelph, is burned out.

Campbell Bros, tinsmiths, Perth, have sold out to Albert T. McArthur.

W. K. Ratz, Ratz Siding, has sold his sawmill to E. McDonald, North Bay.

Joseph Stafford & Co., harness merchants, St. Mary's, are closing business.

The business of A. W. Kelly, hardware merchant, Collingwood, is for sale.

Wm. M. Drader, Chatham, manufacturers of cooperage stock, have suffered loss by fire.

Clothier & Perry, implement agents, Ottawa, have dissolved partnership, Joshua Clothier continuing.

Eureka Planter Co., Limited, manufacturers of garden tools, Windsor, have assigned to Wm. H. Pettit.

Spence and Nichol, manufacturers of lumber, cooperage stock and shingles,

Tara, have assigned to Spence & Denholm.

QUEBEC

David & Colas, painters, Montreal, have dissolved partnership.

A. R. Pruneau & Co, coal merchants, Quebec, have compromised.

R. J. McConnell, hardware merchant, Carman, has suffered loss by fire.

Leroche & Calestagne, plumbers, Montreal, have dissolved partnership.

W. F. Lawrence, planing mill, etc., Maple Creek, is asking for an extension.

James Howard, harness merchant, Lyleton, advertises his business for sale.

D. Boileau & Cie., contractors, Isle Bizard, have admitted Damase Boileau into the firm.

A Ramsay & Son Co., wholesale paints, oils, etc., Montreal, have admitted Alexander Ramsay to the firm.

Cumming Bros., Boissevain, have been succeeded by J. J. Millidge in the management of the electric light plant.

Hercule Dupre and Arthur E. Beaupre have registered under the style of H. Dupre & Co., sawmill, etc., Portneuf, Napoleon Rinfrit and Leon Rinfrit have registered under the style of Rin-

fret & Freres, implement agents, St. Clet.

Joseph Thibeault and Philibert Martineau have registered under the style of Thibeault & Martineau, contractors, Montreal.

The assets of Andre Villani, lumber merchant, Sciene Italienne, are to be sold by tender on November 24. Manitoba and North west.

BRITISH COLUMBIA.

The sawmill of the Laurie Lumber Co., Marysville, has been destroyed by fire.

The Ladysmith Iron and Stove Works Co., Limited, Ladysmith, have been incorporated.

NEW BRUNSWICK.

D. Laliberte, St. John, has sold his machine shop to Ketchen & Bedington.

F. & L. Tufts, produce and lumber merchants, St. John, have dissolved partnership.

Isaac Beamiger, of Beamiger & Chapin, sawmill and general store merchants, Dalhousie, is dead.

Adams, Burns & Co., lumber merchants, Bathurst, are applying for incorporation as Adams, Burns Co., Limited, capital \$175,000.



We don't bet

but we are ready to match the **NEW CENTURY WASHING MACHINE** against all comers. We make emphatically the very best washing machine in existence—the one that causes least fatigue to operate, and the one whose working principles are the best yet conceived.

It is built like a bicycle.

Sells on sight.

Used with delight.

Send for our catalogue for full account.

The Dowswell Manufacturing Co., Limited, Hamilton

PAINT, OIL AND BRUSH TRADES

Their Canadian Convention.

THE annual Canadian convention of the Sherwin Williams Co. was held at their new works in Montreal on Friday last, following their general convention held recently at

the warehouse capacity at Newark was increased; large extensions are now being made to the linseed oil mill at Cleveland; a new distributing point has just been opened at Portland, Oregon, and other depots are to be established shortly at Cin-

were not neglected. A most delightful automobile ride was taken through Chicago's park system on Wednesday afternoon and a banquet was held at the Auditorium Hotel the evening of the same day at which after-dinner speeches were made by President Sherwin, Vice-President Cottingham, and many of the managers and representatives of the various divisions.

Alabastine Co.'s New Factory.

The new factory of the Alabastine Co., Limited, Paris, Ont., is now completed, and also their separate office building. The new factory is up-to-date in every particular, and the office building is very commodious. Thus the firm are in a better position than ever to attend to the requirements of their customers.

Besides being inconvenienced by the fire in their factory the Alabastine Co. were also handicapped by the giving out of their power dam and also by a cave-in in their mine. However the firm is again on a working footing.

cinnati, and at Savannah; thirty-six new representatives have been added to the selling staff. This is surely a good record for a year that some business concerns have found dull.

Social pleasures during convention week

Chicago. W. H. Cottingham, president of the company, and A. E. Schaffer, of Cleveland, were present. The business session was held during the afternoon, at which eighteen of their Canadian travelers and the officers of the company discussed business methods. In the evening a concert and dance was given by the firm for the employees, at which there were about 450 in attendance. An attractive program was presented and thoroughly enjoyed by all, after which a couple of hours were devoted to dancing on the polished floor of the large hall in the new building. The kindness of the executive was appreciated by their guests, who are all enthusiastic in their praises for the firm with whose interests they are connected.

Their 24th. Annual Convention.

ALL the managers and traveling representatives of the Sherwin-Williams Co. met for the twenty-fourth time in annual convention at the company's Chicago plant during the week of October 31st. All former conventions have been held at the home plant at Cleveland, but it is an evidence of the greatness of this concern that their wide organization makes them equally at home in practically all the large centres of the continent.

During the last twelve months, despite the quietness of trade and the tendency towards depression in several localities, the company's business has steadily increased and the year just closed was by far the largest in their history. A new paint plant was completed at Montreal; new general offices were completed at Cleveland; another factory was erected at Chicago



You can buy paint for less money than you can buy Hollywood Paint, but when your customers count the labor of putting it on, it would be dear paint in comparison to Hollywood if they got it for nothing.

Hollywood wears on the job, not off it.

In Paste, Ready Mixed and Floor.

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED.

TO THE VARNISH BUYER

the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

BERRY BROTHERS, Limited

VARNISH MANUFACTURERS

WALKERVILLE, ONT.

Write for our 100 page illustrated catalogue. Every dealer should have a copy for reference.

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.

In these days of keen opposition we are often confronted with goods that are not up to the standard of trade, and very often we buy what we consider A1 and same turns out to be not as represented, but an inferior quality.

Linseed Oil is one of the hardest to detect, but every barrel we turn out is fully guaranteed, thus the advantage of buying Livingston's Linseed Oil.

The Dominion Linseed Oil Co.

Limited

WRITE FOR PRICES.

HEAD OFFICE : 34 YONGE ST., TORONTO.

FACTORIES: BADEN, LORA, GUELPH, OWEN SOUND, ONT.
and 31 Mill Street, MONTREAL, QUE.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Nov. 17, 1904.

WITH a general improvement in the weather and a feeling of exhilaration in the air concerning trade, shippers of paints and varnish have little to complain. A sharp advance in dry white lead at the main points of production has acted as a fillip to orders in staple lines into which the consumption of white lead enters. Ridiculously low prices which have prevailed for some time in the Canadian trade are still a feature. With the advance in pig lead and dry white lead there should be a lift up of at least 50c per hundred lbs. With abundant stocks linseed oil is somewhat easier, and the price this week is quoted one cent per gallon lower. Turpentine has also been shaded and the attention of readers of Hardware and Metal is called to a reduction of 2c per gallon. Other prices remain unchanged. We quote:

Turpentine—Single barrels, 79 1-2c per gallon; 2 to 4 barrels, 78 1-2c gallon. For smaller quantities than barrels 5c extra per gallon is charged. Standard gallon is 8.6 lbs. The above prices are net thirty days, for longer terms prices are higher.

Linseed Oil—Raw, 1 to 4 barrels, 43 to 44c; 5 to 9 barrels, 42 to 43c; boiled, 1 to 4 barrels, 43 to 47c; 5 to 9 barrels, 45 to 46c; delivered in Ontario between Montreal and Oshawa at 2c per gallon in advance.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2 \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1. 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less

quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in whole-sale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Nov. 18, 1904.

THE paint and oil situation in Ontario continues unchanged from last week, with the exception of a probable advance in white lead on account of impending changes in the tariff which may force the price up to the extent of 50c per hundred. Turpentine is a little easier than last week although a change in quotations is not warranted as yet.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lbs. and upwards: 1-2c per lb. extra will be charged for 12 1-2

lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs., \$4.25; ditto, in kegs of 100 lbs., \$4.50; No. 1, in casks of 560 lbs., \$3.75 to \$4; ditto, in kegs of 100 lbs., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$3 to \$3.10; white, \$3.10 to \$3.20 per gallon; No. 1 (orange), \$2.50.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 45c; boiled, 48c; 5 to 9 bbls, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 77c; 2 to 4 bbls, 76c, Toronto; 5 bbls and over, f.o.b. point of shipment, net 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb.; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground 10 1-2c; finest American white, 19c; No 1 American white, 15c per lb.

Putty—Ordinary, bladders in barrels, \$1.65; pure linseed oil, \$2 to \$2.10;

FIRE AND WATER

In April last destroyed our factory, office-building and all our records of business done in the past, except a few books of account we had in the safe.

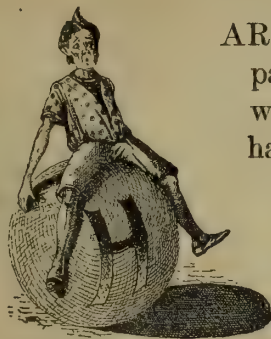
About all we had left was **energy**, and a small bank account, with full knowledge of how to make **Church's Cold Water**

ALABASTINE

the Permanent Wall-Coating, that hardens with age, is extensively advertised and in demand everywhere. It sells on its own merits.

We have rebuilt. Everything is new and up-to-date. All dealers coming our way are invited to call and look us over. Expect that only a small proportion of our patrons can do this, but there is nothing to prevent giving your order for goods in our line when called upon by our own or the jobbers' travellers. Stock up early to ensure having goods on hand when the season opens.

The Alabastine Co., Limited, Paris, Ont.



ARD work to keep the ball rolling, but who's afraid of hard work when the pay is good? So far as we are concerned, we find genuine pleasure in working hard in an effort to serve Paint, Oil and Varnish dealers as they have never been served by any other firm in the business.

Our Monarch White Lead

is a winner from the word go. Perfect in body, durability and firmness. Get it for a good thing.

STANDARD PAINT & VARNISH CO., Limited, WINDSOR, CANADA

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES
MONTREAL.

GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

Established 1815

ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.,



Agents for Canada: A. Ramsay & Son Company, Montreal

TRADE WITH ENGLAND

Every Canadian who wishes to trade successfully with the Old Country should read

"Commercial Intelligence"

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$1.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO MONTREAL LONDON
OTTAWA WINNIPEG



"ISLAND CITY" GOLD PAINT

for decorative work is a winner these days. Are you getting your share of the profits? How is your stock?

P. D. DODS & CO., Montreal Toronto Vancouver

THE
RECOGNITION
OF
THE
SUPERIORITY
OF
THE
CANADA
PAINT
COMPANY'S
VARNISHES
LEADS
THE
PROSPECTIVE
PURCHASER
TO
CHEERFULLY
PAY
THE
SLIGHTLY
HIGHER
PRICE
ASKED
FOR
THEIR
FAMOUS
BRANDS.

bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2c per lb. and 8 1-2 for single tins.

Window Glass.

MONTREAL.

Although a large part of the Fall glass trade is now over, it is generally supposed that stocks in the retail stores are quite low. Jobbers stocks are none too complete, so that the supply is small indeed. Any glass not on the ocean now must come by advanced freight rates. It was mentioned in this column a week ago that another advance in glass would take place shortly, as yet this has not happened, and the reason is that some of the dealers prefer to close out their entire stocks at the present price and go out of the glass business for the season at least. Our quotations are as follows: First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent discount thirty days.

PETROLEUM.

Refined—The market is very firm and indications point to an advance in price, although it may not take effect for some eight or ten days. The demand is good. We quote: Refined Canadian water white, 18c; Canadian prime white,

16 1-2c; American water white, 18 1-2c ex warehouse.

Crude—Market is unsteady. Prices have advanced on American crude from 1 to 4c during week. We quote the following: Pennsylvania, \$1.60; Corning, \$1.37; Newcastle, \$1.47; North Lima, \$1.07; Tiona, \$1.75; South Lima, \$1.02; Whitehouse, \$1.01; Somerset, \$1.01; Indiana, \$1.02; Canadian, \$1.53.

New York Turpentine Markets.

Dealers report only a limited volume of business transacted on the market for spirits turpentine, the buying still being of a largely hand-to-mouth character. Spot stocks are limited, and with the Savannah market holding steady sellers were not forcing the market.

Flaxseed in Chicago.

The flaxseed market has been lacking in interest for the week and prices remain stationary. Crushers are buying, but not as eagerly as they would if the linseed oil market were more active. Both here and abroad there has been decided apathy among large buyers of oil. The English market seems to have touched bottom at £15 15s in barrels, the latter quotations showing that the Hull price for naked oil is slightly improved, while the barrel price is well maintained. LaPlata seed recovered in consequence from 31s 6d to 32s. Calcutta seed is steady. Judging from similar experiences in the past the English market on both seed and oil has touched bottom again. When oil reaches a specially low point the large consumers there take advantage of the favorable offers to lay in heavy stocks and their buying usually results in an up turn in the market.

An impression prevails in northwestern markets that quantities of flaxseed are in farmers' hands and will be shipped a little later when all other grains are disposed of. No doubt there is good reason for this impression. Flaxseed in interior elevators October 31 was estimated at 1,467,000 bushels, compared with 1,362,000 bushels at the corresponding time last year. The difference, evidently, between last year and this is that the seed was marketed much earlier than now, so that we may reasonably expect larger receipts of seed in the coming weeks of 1904.—Paint, Oil and Drug Review.

ANGLO = SAXON

Stock Food

—AND—

Veterinary Preparations



Three of the four pigs that won the Anglo-Saxon prize at Ottawa owned by J. E. Brethour, Burford, Ont.

ARE SOLD TO DEALERS AND TO DEALERS ONLY.

We offer Dealers greater and more practical inducements than any other Stock Food concern.

We have nothing to say about the goods of others,—we are selling our own: and we know that they are right.

With his hogs fed and fitted on our food, J. E. Brethour, of Burford, Ont., cleaned up practically all the prizes in his classes **against all-the-world competition at St. Louis Exposition**, winning **Fifty-three prizes in all**, including **The Premier Championship** of the world, and others almost as important.

Every stockman knows Mr. Brethour, and no stockman wants a higher recommendation than the above.

To demonstrate our confidence in our goods we authorize dealers to sell **on positive trial**.

WRITE US TO-DAY FOR OUR PROPOSITION!

It Will Interest You!

THE NAISBITT CO., Limited,

TORONTO, CANADA.

WINNIPEG BRANCH: 184 James St.
D. C. POWYS, Manager.

MARITIME BRANCH: St. John, N.B.
W. W. HUBBARD, Manager.

A LETTER :

INTERNATIONAL STOCK FOOD CO.,

DEAR SIRS:

We took hold of the agency for your stock food in this district last summer, and have to say that it has been a good thing. You certainly know how to help us sell your goods. Better still, the farmers speak very highly of your stock food. We are sorry that we didn't have your line years ago.

Yours truly

SMITH, PEABODY & Co., Hardware Dealers.

MORE LETTERS

on application. You can write these agents for yourself. One and all, they are enthusiastic over

INTERNATIONAL
STOCK FOOD

—the best in the world. Why don't you write for our proposal ?

INTERNATIONAL STOCK FOOD CO., TORONTO.



WILL MAKE HENS LAY

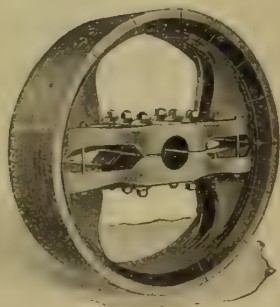
COLONIAL POULTRY FOOD is guaranteed to produce good health, and to make hens lay. This food of ours sells readily, and it pays surprising profits.

Hardware dealers, get the agency now for Colonial Poultry Food and Colonial Stock Food.

Send for our literature and list of testimonials.

COLONIAL STOCK FOOD CO.

79-81 WILLIAM STREET, TORONTO



MADE IN CANADA.

FAIRBANKS Wood Split
PULLEYS

ARE RECOGNIZED BY ENGINEERS TO BE
SUPERIOR IN MECHANICAL CONSTRUCTION.



RETURNED To Owner
JAN 20 1905
Cut Book 29
Page 11

We have just received from the printers our new catalogue of Power Transmission Appliances, illustrating and describing our complete and up-to-date line of Belting, Hangers, Shafting, Couplings, Wood and Steel Split Pulleys, Elevating and Conveying Machinery, etc.

CAN WE MAIL YOU A COPY ?

THE FAIRBANKS COMPANY.

MONTREAL

TORONTO

WINNIPEG

VANCOUVER

MACHINERY

THE MACHINERY MARKETS.

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street.

Montreal, Nov. 17, 1904.

FOLLOWING the depression and comparative inactivity that that have been predominant in the machinery market recently, the present week finds the demand slightly better and the outlook a little brighter. Sales are more in number and business pending is of larger amount. It is hardly comparable, however, with the volume of business of a month ago.

The recent advance in the metal market has had no effect as yet on the prices of finished machinery, but they can hardly fail to be stiffer, and a general advance may be expected. Manufacturers are catching up on some lines, while on others they are able to stock ahead, which they have not been able to do for some time heretofore.

Supplies are moving rather slowly, which would indicate that the general tone of the market is passive rather than active. The two lines that have given satisfaction and been most profitable in the machinery world during the past few months are wood working and electrical machinery. The sales of these have continued without interruption. There is little prospect for a material change in this market for a few weeks at least.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front street east,
Toronto, Nov. 18, 1904.

THERE have not been any very important deals made on the local market this week. The prospects are, however, quite good. Inquiries are coming in well for nearly all lines, and a fair amount of ordinary business has been done.

The lines for which there has been the most inquiry during the two past weeks are electrical machinery, engines and boilers and woodworking machinery of all kinds.

New Ice Breaking Boat.

A twin screw ice breaking boat has just been launched, the future of which will be closely watched by the people of

Canada. It has been built by the Canadian Government for use in the St. Lawrence River route. The total length of the new boat is 245 ft., breadth 40 ft. 6 in., and depth 18 ft., with a gross tonnage of 18 ft. The machinery consists of two sets of triple expansion engines, having cylinders 23½ in., 38 in. and 64 in. in diameter, by 42 in. stroke. The boilers are of the water tube type, and were installed by the Babcock & Wilcox Co.

Machinery and Electrical Notes.

The Carney Lumber Co. have started to build their new plant at Owen Sound.

A new iron rolling mill is to be opened near the new C.P.R. shops in Winnipeg.

Negotiations are under way for the erection of mills for the manufacture of tin and metal sheetings, at Morrisburg, Ont.

James and Joseph Murphy, Margaree, C.B., are building a water power sawmill at South Branch for James Doyle & Sons.

The Kamloops Lumber Co., Kamloops, B.C., have started the construction of a new sawmill to replace the one destroyed by fire recently.

The Acadia Sugar Refining Co. are having Rhodes & Curry construct a one-hundred horse-power engine for the Moncton barrel factory.

The contractors have finished building the Goldie & McCulloch Co.'s new boiler shop and engine house at Galt, and it is now ready to receive the machinery.

The dam and power house in connection with water power which is being developed on the Wahnapiatae River near Sudbury are completed and the machinery is being installed.

The Frost & Wood Co., Limited, Smith's Falls, have just completed arrangements whereby they will handle the entire output of the Woodstock Wagon Co., of Woodstock, this company having been appointed exclusive selling agents for Canada. They will now be in a position to supply the requirements in wagons and sleighs to their numerous patrons.

Machinery Gossip.

An automatic gas pump has recently been exhibited, constructed upon a plan enabling it, when set in operation, to run automatically, and to produce as perfect a Torricellian vacuum as is possible. It has been devised to provide a comparatively portable machine, suitable to special laboratory work, and for researches requiring prolonged pumping. A Rontgen ray bulb of a capacity of 200 cubic centimeters can be exhausted in thirty minutes.

Nearly 10,000 tons of ore were removed in four hours and a half from the steamer A. B. Wolvin by the working of two kinds of modern ore machines at one time. Eight machines were used in all, four of the Brown machines fitted with clam-shell buckets and four of the Hulett machines, which are the automatic ore unloaders with the ten-ton buckets. In all the vessel has 33 hatches. As soon as one machine finished a hatch it was transferred to another without a moment's delay.

A great convenience for the draughtsman, which has recently been put before the public by an English firm, is a transparent drawing board, the feature of which is a plate of glass, one-quarter of an inch thick, which is sunk into a wooden frame so the edges of the wood and glass are quite flush with each other. Convenient bars are arranged across the apparatus, on which the originals to be worked over are fastened, and there is also a rest for the forearm of the draughtsman while at work. The board may be tilted at any desirable angle, and held at the proper point by two props, which fold up into the frame of the device when it is desired to pack it away. A mirror is swung under the glass, which can also be fixed at any suitable angle, and the light reflected by this can be made to strike under the work, and the task of copying a drawing thus made quite easy. Where there is a lack of light, the illumination may be supplied by means of a row of electric lights fitted along the edge of the board. The apparatus folds flat and is very portable.—Scientific American.

Avoiding Scale in Boilers.

THE formation of scale in boilers is the most fruitful source of accidents and one of the greatest evils and annoyances with which the boiler user has to contend. In places where the water used for steam generation is, hard the trouble is particularly active, and the best solution of the difficulty seems to be the installation of water softening apparatus in the boiler house. This has been tried by different railroads and other users of power with satisfactory results. Data on the subject has been given by J. O. Handy, chief chemist, Pittsburg Testing Laboratory.

THE ECONOMIC RESULTS OF WATER SOFTENING.

The considerations which lead to the taking up of water softening by steam users may be grouped as follows:

First.—Loss of service of locomotives or boilers, due to impossibility of satisfactory continuous operation with hard water.

Second.—Possibility of substantial savings in fuel and repair bills and the checking of rapid deterioration of boilers.

The cost of water softening undertaken for the first reason is not always a matter of prime importance. It must be reasonable of course, but results are the main thing. In most cases, however, water softening stands or falls by the relation of what it costs to what it accomplishes.

The charges against a water-softening installation are:

Interest on cost of plant.

Depreciation.

Chemicals for softening.

Attendance.

Power for operation (and repumping.)

The credit items for a softener are:

Fuel saving.

Repair saving.

Depreciation saving.

Increased services obtainable from steam generators.

COST OF SOFTENING PLANTS.

The best softening plants cost from \$4 to \$5 per h.p. for installations up to 1,000 h.p., for 1,000-2,000 h.p. the cost is \$4 to \$3 per h.p., from 2,000-5,000 h.p. the cost is \$3 to \$2 per h.p., from 5,000-15,000 h.p. the cost is \$2 to \$1.20 h.p.

DEPRECIATION.

The above figures refer to steel construction. Plants for which wooden tanks are used are sometimes offered at as high rates, but the depreciation of wooden tanks under service conditions is much greater beside other disadvantages. If steel tanks are reasonably well cared for,

5 per cent. is more than enough to allow for their depreciation.

COST OF CHEMICALS.

The quantity of chemicals required for softening varies directly with the character of water treated. The prices of lime and soda ash do not vary much in different sections of the country. There is, however, great choice in commercial limes, much of the building lime being so high in magnesia as to make it unfit or uneconomical for use. From 90 to 95 per cent. lime can be had and should be insisted upon.

The cheapest waters to soften are those the hardness of which is due to carbonates of lime and magnesia only. Such waters require simply lime water treatment. It cost only 0.9c. per 1,000 gal. to remove 1.42 lbs. of carbonate of lime (equivalent to 10 gr. per gal.) and only 0.48c. to remove the same quantity of carbonate of magnesia.

These amounts are sufficient to give a great deal of trouble in heaters and boilers.

The removal of sulphates and other soluble compounds of lime and magnesia from water requires the use of soda ash. It cost 1.20c. per 1,000 gal. to remove sulphate of lime equivalent to 10 gr. per U.S. gal. The same amount of sulphate of magnesia requires 1.36 lb. of soda ash which costs 1.36 per 1,000 gal.

The cost of chemicals for softening water varies from 0.5 to 5c. per 1,000 gal., averaging from 1 to 2c.

ATTENDANCE.

The cost of attendance at softening plants varies greatly, but is never more than that of the time of one man (or boy). It is often much less. The most common arrangement is for the engineer or pumper to look after the softening plant.

With the best type of plants two or three hours per day are all that are required for attendance unless the installation is very large.

Chemical tests for control of the softening plant can be carried out by persons of average intelligence.

POWER OF OPERATION.

Separate power installations for softening plants show bad engineering. Such plants are absolutely dependent on outside power, and such small steam installations are costly to operate.

The best plants have all stirrers or other mechanism actuated by water power. The flow of water to be softened starts everything.

REPUMPING.

Many softening plants now in existence are so designed that the softened water is

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

MACHINERY WANTED.

Items under this heading inserted free for readers of **HARDWARE AND METAL**

WANTED—Portable saw mill—in good running order; give particulars and price. Box 793, Globe.

WANTED—New or second-hand—in first-class condition, f.o.b.; a 300 incandescent light dynamo, with wire and fixtures for 1½ miles. Address John H. Babcock, Box 7, Odessa P.O., Ont.

WANTED—Second-hand engine lathe; 18-inch swing x 10 ft.; one 3 h.p. gasoline engine. E. A. Prince, 4 Maplewood Place, Toronto.

WANTED—25 hoisting engines—single and double drum; with or without boiler; new or second-hand. Address H. W. Petrie, Toronto.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

TUBULAR BOILERS—A large number of first-class second-hand tubular boilers of all sizes for sale by the Polson Iron Works, Toronto.

FOR SALE OR RENT—Water-power building, 40 x 80, two-storey and basement; also saw mill machinery, lately removed from another building; ready to run. McClellan, Reid & Shaneman, Gananoque, Ont.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, **HARDWARE AND METAL**, Montreal.

ENGINE FOR SALE—20 h.p.; stationary, side crank. Price \$80. Address Box 41, **HARDWARE AND METAL**, Montreal.

GAS AND GASOLINE ENGINES—None better; write for prices and particulars. Tuerk Iron Works, Berlin.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.

STEEL CASTINGS—Equal to any foreign made ones, can be had from the Wm. Kennedy & Sons, Limited, Owen Sound.

WORK AND
PRICES
RIGHT
GALVANIZING
ONT.
WIND
ENGINE & PUMP CO.
TORONTO, ONT. LIMITED.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works
"Machinery," Newport. NEWPORT, MON., ENGLAND

A MOST USEFUL FIRM

We cut to your order, any size, on short notice

BRASS and COPPER

—Sheets
—Tubes
—Rods

The waste is ours—not much waste, though.

The Booth Copper Co.,
LIMITED,

119-123 Queen St. East,
TORONTO.

"MAPLE LEAF"

Stitched Cotton Duck Belting



MADE IN CANADA

MADE IN CANADA

"Maple Leaf" is made of the best cotton duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.

"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying

Main Drive Belts a specialty.

Ask for "Maple Leaf" and take no other.

Beware of Imitations

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY

HAMILTON, ONTARIO. Limited

Use our "MAPLE LEAF" Belt Dressing.

WE are the only concern in England who make Cap and Set Screws, on Canadian and American lines. Certain conditions given, amongst others the British Preferential Duty, make it possible for us to land our Products in Canada at less than American prices. Why should you not take advantage of this? Will you have a catalogue and discounts?

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

Clauss Brand

Double Swedged Blade

Pocket Scissors.

FULLY WARRANTED

Hand forged from finest steel. Welded on our Composition Metal. Hardened in water. Tempered by Natural Gas. Full Crocus Finish and Finely Nickel Plated.



I. A. TOBIAS,
Canadian Agent.

THE CLAUSS SHEAR CO.,

169 Spadina Ave.,
TORONTO

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels

Superior in Design, Workmanship and Finish, and the most popular Gun on the Market.



Simplest
"Take Down"
Gun Made

HARRINGTON & RICHARDSON ARMS CO.
Also makers of H. & R. Revolvers.
Catalog on request. Worcester, Mass., U.S.A.

BABBIT

THE
QUALITY & PRICE TO SUIT
ALL GRADES OF WORK

NO. 0
NO. 1
STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL
CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.

Cap Screws, Set Screws,
Machine Screws,
Cold Pressed Nuts,
Studs, Coupling Bolts,
SPECIAL MILLED WORK, Etc.

CANADA FOUNDRY CO., Limited

Head Office and Works; TORONTO, ONT.

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MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
CALGARY, VANCOUVER, ROSSLAND.



discharged at or near ground level. This involves the use of a pumping plant to re-elevate the softened water.

The best type of softeners are those built in the form of towers and discharging the softened water into service tanks at a level only a few feet below the point at which the hard water was received.

FUEL SAVING.

The earliest recorded researches on the subject of loss of heat caused by boiler incrustation are those of John Graham, conducted in 1850 to 1857, and published in the Memoir of the Literary and Philosophic Society of Manchester in 1860. He says: "A scale of sulphate of lime 1-16 in. thick reduced the efficiency 14.7."

New Works for Montreal.

THE Canada Car Co., recently organized with a capital stock of \$3,000,000, has now under way at St. Henri, near Montreal, a plant which when completed will employ over 1,000

crusher and concrete mixer are stationed at different points, and these are being worked to their full limit supplying material for the foundation, which is to be concrete throughout. About 2,000 feet of drain pipe has been laid, and when the draining is completed, the foundation in, and all levelling done, operations will be suspended until Spring, when the work will be pushed with the utmost expediency.

The buildings have been arranged for the most economical handling and operation of material, and when completed will be among the most modern on the continent. Everything pertaining to the make-up of a car will be manufactured and the capacity of the works when running is expected to be very large. The arrangement is such to admit of further extension at any time in the future. The buildings will be up-to-date in every particular with frame work of steel, concrete or brick walls and gravel roof. They will be arranged in two groups, with the power-house, store-house and office

Freight car erection shop	301 x 70
Passenger car erection shop.....	301 x 70
Wheel, axle, truck and bolster shops....	301 x 70
Passenger car paint shop.....	301 x 70
Freight car paint shop.....	322 x 70
Store house.....	120 x 80

Most of the shops will be served by electric overhead cranes, and tracks will be laid throughout such shops as require them, and throughout the yard, so as to entail the minimum amount of movement. Electric power will be used wherever practicable, many of the machines being driven by separate motors. Large machines will be driven by separate steam engines, while the smaller machines in groups will be driven from shafting. Compressed air will be piped throughout the plant to operate riveters, reamers, rivet furnaces, etc.

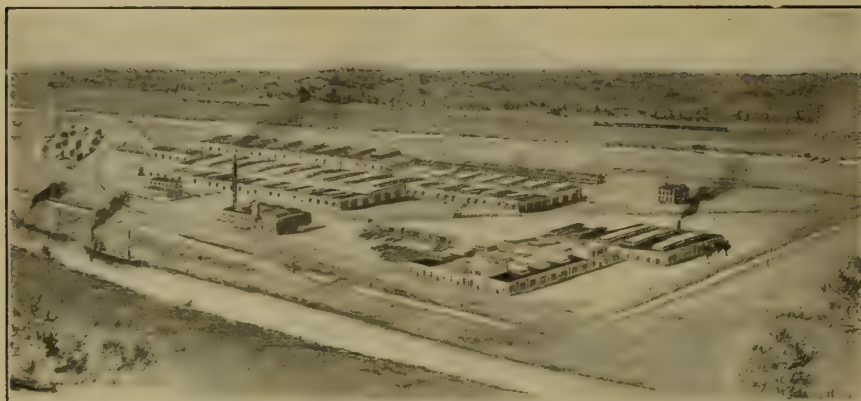
The plant, which will be entirely self-contained, will manufacture everything from the raw material, lumber and steel. The initial capacity of the shops will be about ten passenger cars per month and 20 freight cars per day, with their corresponding trucks. While wooden cars will be the first product, provision is being made by the company to manufacture composite, wood and steel, and all steel cars, pressed steel or structural shapes, street cars and special types of trucks and holsters, and other specialties used in car building. The methods of manufacture of the Pressed Steel Car Co. will be closely followed, and its patents will be used by the Canada Car Co.

The situation of the plant on railroads and canal will enable shipments to be made and received with great facility, and especially will the plant be able to take care of foreign work, as vessels can load up at the car company's docks and deliver to foreign ports without breaking bulk.

The president and general manager of the company, W. P. Coleman, has offices at 529 Board of Trade Building, Montreal. He is assisted by N. S. Reeder. The contract is in the hands of D. G. Loomis & Sons, contractors, Montreal.

Turbine Company Incorporated.

The Canadian Turbine Propulsion Power and Light Co., Montreal, capital \$500,000; purpose to acquire patents relating to the development, transmission and application of power produced by any means; to manufacture and equip any kind of motor, engine or machine for producing and using said power. The directors are: W. Rowbotham and H. Levetus, both of Toronto; M. Auerbach, N. P. Bryant and H. H. Hull, all of Montreal.



New Works of Canada Car Co., Montreal.

hands. The property acquired by the company comprises 50 acres, bound on the north by the Grand Trunk Railway, and on the south by the Lachine Canal, just west of Cote St. Paul, giving excellent transportation facilities. The illustration shown in this issue gives an idea of the general appearance of the works when completed.

Anyone familiar with the peaceful market garden scene, that has heretofore presented itself to view at this spot, would wonder at the sudden transformation that is being effected. Where during the past season all sorts of market produce has been raised, about 300 men are now busy changing the configuration of the land. The sites of the different buildings, which will occupy about seven acres, have been laid out and for the main buildings the foundations are well under way. A stone

buildings separate from the main structures. One group is to consist of machine shop, brass foundry, forge and smith shop, gray iron foundry and wheel foundry, while the second group embraces the planing-room, matching-room, cabinet, pattern and carpenter shops, trimmers' and upholsterers', car erection, passenger car erection, and wheel, axle, truck and bolster shops. Contiguous to this group will be the passenger and freight car paint shops. The floor area of the various shops is to be as follows:

	Feet.
Machine shop.....	129 x 70
Brass foundry.....	86 x 70
Forge and smith shop.....	301 x 70
Gray iron foundry.....	215 x 70
Wheel foundry.....	215 x 184
Planing mill.....	387 x 70
Matching room.....	236 x 70
Cabinet, pattern shop and carpenters' department.....	236 x 70
Trimmers' and upholsterers' shop.....	172 x 70

THE FISHER TUBE SKATE



THE LIGHTEST, STRONGEST,
EASIEST RUNNING AND
PRETTIEST SKATE
IN THE WORLD.

Dealers:

It will pay you to handle the Fisher Tube Skate, there is a demand for them.

The large makers of ordinary skates are now compelled to make Tube Skates. It will take them years to get to our standard. Tube skates are not made like ordinary skates.

Write to-day for Catalogue and Prices.

The A. D. FISHER CO., Limited
34 Richmond Street East
TORONTO

A PERMANENT
and Handsome Roof.



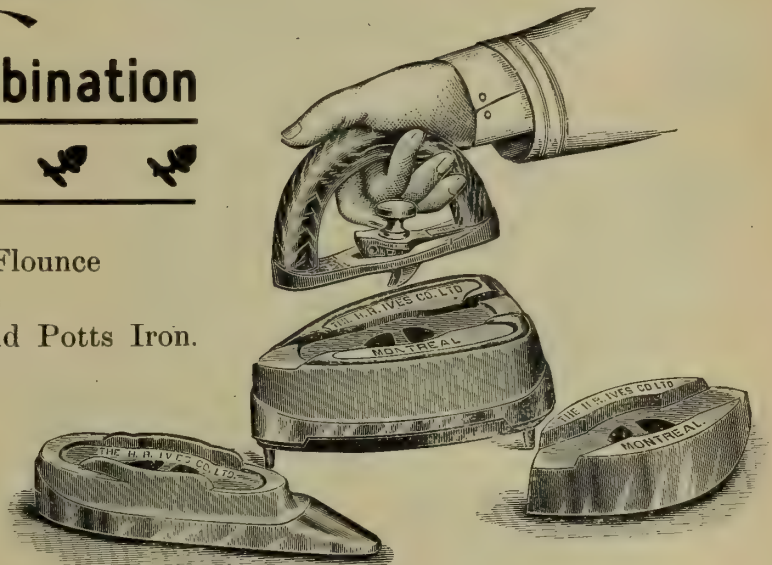
Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write to-day.

NEW Combination Set

Pressing, Flounce
and Sleeve
and Potts Iron.



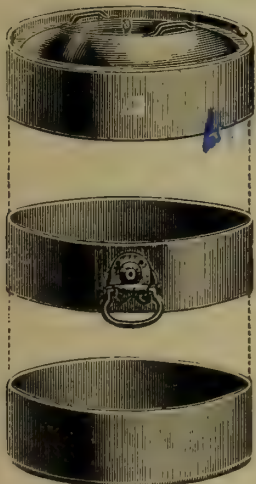
WRITE FOR PRICES

The H. R. IVES CO., Limited, Manufacturers, Montreal

For durability, finish and economy in making up

DAVIDSON'S Broad Hoop, Heavy Roll Rim Bottom Milk Can Trimmings are unequalled.

Patent



In Complete Sets

"BROAD HOOP" Pattern—Composed of the following: 1 Broad Hoop Bottom, 1 Cover, 1 Centre Hoop 6 inches wide, 20 gauge, 1 Broad Top Hoop, 1 pair Cover Handles, 1 pair Side Handles.

Popular Features

Our Broad Hoop Bottom is built to defy hard usage and has all the advantages of a seamless bottom without the strain that spinning entails.

Bottoms can be sweated in, using little solder.

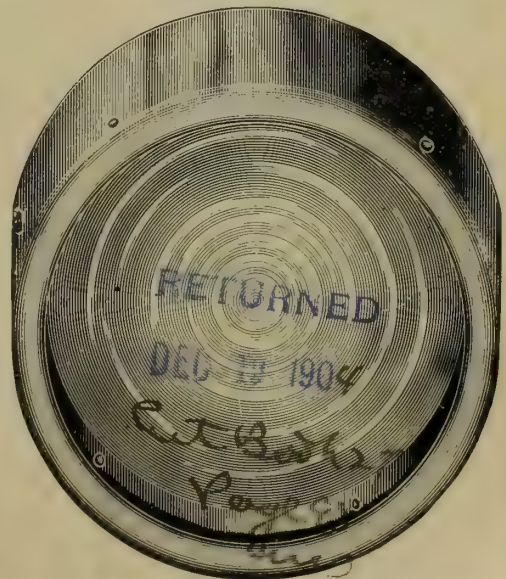
Bottoms are concave, draining to the centre, and are therefore easy to wash out, and will not corrode.

Heavy Rolled Edges makes our Patent Bottoms doubly durable and factory and waggon floor protectors

Top Bands are Shouldered and all bands have retinned edges.

We can also supply best quality
Tinned Iron at lowest market prices.

The Thos. Davidson Mfg. Co. Ltd.
MONTREAL



See how the Outer Rim and Inner are rolled in and Rivetted to Bottom Hoop as well as being rolled together.



IDEAL STOVE POLISH

The best Stove Polish on the Canadian market to-day
Get it from your own jobber

ST. ARNAUD FRERES,

425 St. Paul St., MONTREAL.

**STOVES AND TINWARE.****Aluminum.**

PROFESSOR THOMAS TURNER, president of the University of Birmingham Engineering Society, in a recent address said that of the metals which were now in common use aluminum was the most recently discovered. The name was derived from alum, which was well known to the ancients. In connection with investigations which were being carried on at that time in relation to fixed earths, the earth-alumina were obtained by Morveau in 1770 by heating alum.

Sir Humphrey Davy gave the name to the metal in 1807, but failed to decompose alumina. Aluminum was first produced in the form of a powder in 1827 by Wohler, but the honor of producing it in more solid form, and on a manufacturing scale was due to Deville, an eminent French scientist, who prepared the metal in 1854 by electrolysis. We were, therefore, now in the jubilee year of its manufacture.

On account of the cost of electricity fifty years ago, the electrolytic method was abandoned in favor of reduction by means of sodium. In the early days of the discovery very exaggerated ideas were entertained as to the value of the new metal, it being thought by some that it was a new precious metal. The price in 1856 was about £20 per pound troy; but at the present time its value was about £120 per ton. Professor Turner recalled that Birmingham and the district had played a by no means unimportant part in the development of the aluminum industry. The works of Webster, established at Hollywood in 1882, led to a considerable reduction in price; and the chemical process, aided by the cheap production of sodium by the Castner method, was conducted for some years at Oldbury by the Aluminum Co., started in 1887 with a capital of £400,000. The cheapening of electricity had, however, resulted in a reversion to the electrical reduction, which was taken up in 1886 by Hall, in America, and by Heroult, in Switzerland; and by the processes of these two, which were almost identical, the whole of the commercial aluminum was now made. There was only one British company engaged in the industry, and that had works at the Fall of Foyers, in Scotland.

The world's total output was now 10,000 tons per annum, of which more than half was from America. The

enormous increase during the last decade was shown by the fact that in 1890 only forty tons was produced, and the price was about £1,000 a ton. At present aluminum was as cheap bulk for bulk as copper, and cheaper than tin, and as only lead and zinc were cheaper bulk for bulk there appeared to be every probability of a considerable extension in the aluminum industry.

Professor Turner described the process of manufacture in some detail with the aid of lantern slides, and pointed out from a consideration of the thermal aspects of the reduction that although aluminum is in nature the most widely distributed of all the metals, its price could never be so low as that of iron and other metals requiring less heat for their production. He further referred to the wide employment of the metal recently in connection with the motor industry, and for other purposes to which lightness and strength were necessary.

With regard to alloys he said that those in common use might be divided into two classes — namely, those containing about four-fifths of their weight of aluminum with small quantities of tin or copper, these constituting the ordinary aluminum of engineering work; while the other class were the aluminum bronzes, in which nine-tenths of the composition was of copper. The intermediate alloys were, generally speaking, of no commercial importance, although some interesting phenomena were to be observed in their behavior under heat. Reference was also made to the purple alloy of aluminum and gold, and to the use of the metal in the form of ferro-aluminum in steel manufacture for the purpose of rendering cast-steel quiet in the mould.—Iron and Steel Trades Journal.

Stove Pipes and Polishes.

St. Arnaud Freres, Montreal, who are now advertising "Ideal" stove polish, have been in business as manufacturers for five years, each year marking an extension of the demand for their products. In addition to "Ideal" stove polish they manufacture a nestable stove pipe which has won a superb reputation in Eastern Ontario and Quebec; also the "Sarpoli" cleaner for metals. They offer to send to any retailer in Canada a sample of their "Sarpoli" cleaner, that a test of its quality may be made. It is worth writing for.

**"SOLARINE"**

A household necessity
Every hardware dealer should sell Solarine Metal Polish, the polish of quality.

Ontario Agent
H. F. FALKNER,
60 George St., TORONTO

York Polish**FREE SAMPLE**

of York Metal Polish (Liquid or Paste) to any reader of this paper. Cleanses and Polishes at one operation.

**ANGLO-CANADIAN
SUPPLY COMPANY,**
29 CHURCH ST. :: :: TORONTO.

Oakey's

The original and only Genuine
Preparation for Cleaning Cutlery. 6d. and 1s. Cansisters

**'WELLINGTON'
KNIFE POLISH****JOHN OAKEY & SONS, LIMITED**

MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and
Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

**JOHN FORMAN, 644 Craig Street
MONTREAL.**

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CONTRACTS

mean dollars for the pockets of
contractors. The weekly reports in the

**CANADIAN
CONTRACT
RECORD**

tell where contracts may be had.
\$2 per year buys them. Address

THE CONTRACT RECORD

Toronto and Montreal

During the past few weeks, we have received many letters telling us of the excellent results which our **Grand Idea Ranges** are giving to the customers of our many patrons.

Grand Idea Ranges are built on scientific principles, and we knew that they would be a success from the start.

If the range you are handling is not giving your customers perfect satisfaction, don't be a back number any longer; but get acquainted with our **Grand Idea**, and your troubles in this respect will at once cease.

Grand Idea Ranges have many good points, a few of which are: extra deep fire-box; vertical oven damper; convenient basting door; reliable oven thermometer; reservoir that will boil water; drawing out duplex grates; oven that will bake perfectly.

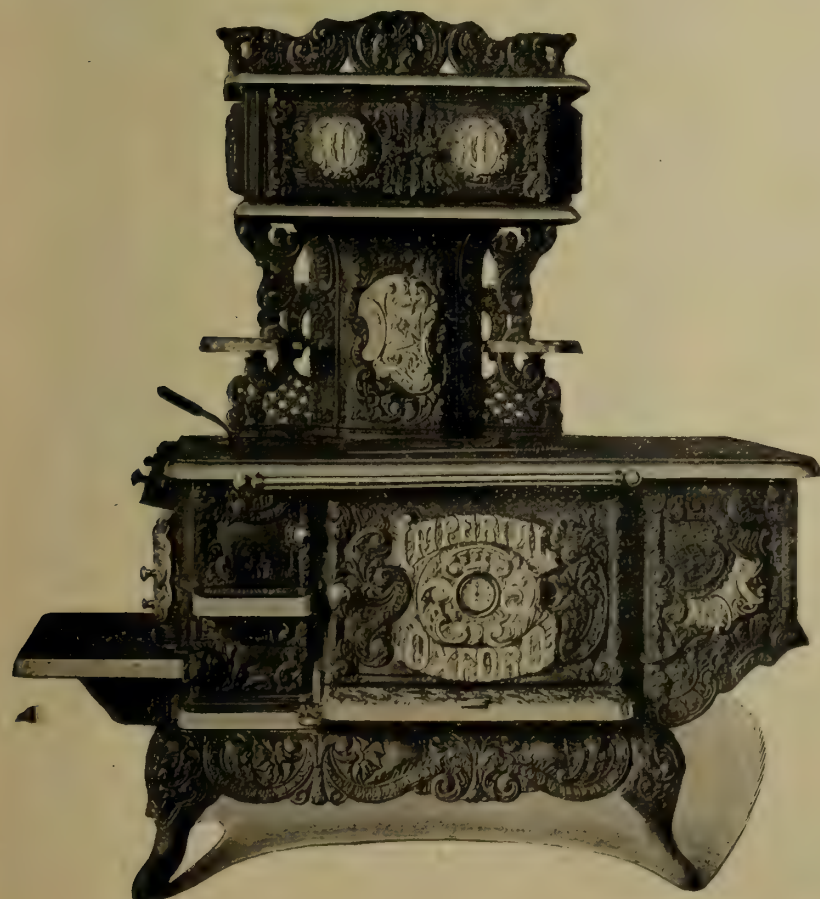
If you want to do the range business of your district, handle the **Grand Idea**, "the Range that never fails."

GUELPH FOUNDRY CO., LIMITED

GUELPH, Ont.

WESTERN REPRESENTATIVES—
MESSRS. E. G. LOW & CO., Market St., Winnipeg

EASTERN REPRESENTATIVES—
MESSRS. PANNETON BROS.
1588 Notre Dame Street, - Montreal, Quebec



When you advise a customer to buy a certain article you are blamed for any disappointment that article may give. It is not the maker that is blamed. Therefore you must choose your stock wisely. If you recommend the

Imperial Oxford Range

to any of your customers you will find it will live up to every claim we have made for it. Write us for full particulars about the agency for your district.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Montreal and Boston Mining and Smelting Co. have been organized with additional capital and new claims. In 1903 this company produced 3,041,104 lbs. of copper, 72,754 ounces of silver and 8,009 ounces of gold from the treatment of 132,570 tons of ore smelted, giving average returns of 23 lbs of copper, 25c silver and \$1.20 gold per ton. With the large list of additional claims as a result of reorganization this company expects to do business on a larger scale next year.

* * *

John A. McGrath, formerly associated with the Lang tannery in Ottawa, and John Lang, of Berlin, who has withdrawn from the Ottawa business, have taken a considerable financial interest in the enlargement of the Welsh tannery of Peterborough.

* * *

Mineral paint in paying quantities has been discovered on the premises of Alfred Cooper, near Fort William. The exact location of the paint bed is in the Slate River district, and experts who have examined the article pronounce it to be of the first class.

* * *

Michigan lumbermen, represented by E. F. Ferris, of Travers City, state that they are willing to invest from a quarter to a half million dollars in the erection of a new sawmill at Kamloops, B.C., if they have the assurance of adequate protection to the industry by the Government.

* * *

An effort is being made by owners of Alaskan tin mines to have Seattle capitalists take some steps towards putting in smelters in Victoria, B.C., to handle the tin that comes down from the north. The indications are for large supplies coming south during the next season, and miners do not want to take it all the way to San Francisco.

* * *

The annual meeting of the shareholders of the St. Eugene Consolidated Mining Company, Limited, was held at Toronto on the 8th of November. The mines of the company had been closed

down for two years owing to the low price of lead, but operations were resumed last May and since then 50,450 tons of ore have been mined. A dividend of 2 per cent. for the quarter ending the 30th September was declared, payable on the 15th of December.

* * *

The Kamloops Lumber Co., Limited, Kamloops, B.C., has started the construction of a new sawmill to replace the one destroyed by fire on the 9th of September. The plant will cost \$75,000, and the output will be 20,000,000 feet per annum, about double the capacity of the former plant. Manager George McCormick states that the monthly payroll will be \$10,000, and the mill will be completed by next April. Ontario and New Brunswick capital is behind the enterprise.

* * *

The output from the Dominion Coal Company collieries for the month of October shows an increase over that of September of 18,340 tons. The output is distributed as follows: Dominion No. 1, 50,671 tons; Dominion No. 2, 66,209 tons; Dominion No. 3, 29,418 tons; Caledonia, 41,260 tons; Reserve, 67,628 tons; Hub, 15,903 tons; International, 22,949 tons; total, 294,038 tons; shipments amounted to 294,615 tons. Work at the collieries is brisk and will continue so till the close of navigation.

NOTES.

The ubiquitous American has invaded Owen Sound and is erecting a large sawmill there.

Conrad Fernan, who is consulting engineer in the construction of the zinc plant at Rosebery, B.C., is planning the erection of a zinc smelting plant at or near Fernie, B.C.

James A. Gill, of Johnston & Co., Limited, Manitoba, says his firm will be able to save fully 40,000 brick from the slide of last week, when the brick kiln and 80,000 brick was swept into the North Thompson River.

The Mineral Water and Power Company is being sued for damages to the amount of \$75,000 by the town of St.

Henri on the grounds that the water furnished by the company to the citizens was not fit for drinking purposes.

COMPANIES INCORPORATED.

Lammon Takajat, Limited, Victoria, B.C., capital \$10,000.

The Ladysmith Iron and Stove Works Co., Limited, Victoria, B.C., capital, \$50,000.

Imperial Construction Co., Limited, Toronto, capital, \$40,000; purpose to carry on the business of contractor. The directors are: H. W. Middlemist, H. L. Dunn, A. D. Crooks, J. W. MacDonald and G. J. Valin, all of Toronto.

The Canada Machinery Co., Limited, Point Edward, capital \$100,000; purpose to manufacture, buy, sell and deal in machinery. The directors are: A. M. MacDonald, T. H. Banton, F. D. Byers, A. A. Magee, and L. Duff, all of Toronto.

The Windsor Gas Co., Limited, Windsor, capital \$200,000; purpose to manufacture and deal in gas. The directors are: S. A. King, W. C. Kennedy, G. J. Leggatt, all of Windsor; I. C. Baxter, Detroit; and A. H. King, of Kingsville.

The Miller-Morse Hardware Co., Limited, Winnipeg, capital \$1,000,000; purpose to acquire hold or sell any goods pertaining to the hardware business. The directors are: H. Miller, F. W. Morse, F. M. Morse, A. Reed and H. A. Robson, all of Winnipeg.

The Lilley & Cameron Cartage Co., Limited, Montreal, capital \$50,000; purpose to manufacture and deal in carriages, carts, wagons, sleighs and other vehicles. The directors are: R. A. Brock, J. J. Riley, K. Cameron, W. L. Bond, H. Cameron, all of Montreal.

The Toronto Cast Stone and Concrete Co., Limited, Toronto, capital \$40,000; purpose to manufacture, sell and deal in all kinds of cements, limes, plasters, artificial stone, etc. The directors are: J. R. Marshall, A. Nelson, J. M. and W. R. Payne, W. E. Sampson, all of Toronto.

The International Bolt Co., Limited, Montreal, capital \$100,000; purpose to sell or buy any invention for the manufacture of bolts and any other hardware by a cold process. The directors are: H. L. Dunning, Lachine; Wm. Eckenstein, A. Hendry, both of Montreal; C. A. Duclous, Westmount, and H. M. Dunning, Lachine.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

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Warren White Sulphur Springs,
Totten P.O., Virginia.

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for news of the Oil, Paint, Soap, Varnish
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Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.

19 LUDGATE HILL LONDON, ENG.

Order a stock of

**"Windmill Best"
Galvanized Sheets**

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, Montreal

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By Buying Imitation FIRE, Water, Dust and Air-Proof SKYLIGHTS. **BUY THE GENUINE.** Our pamphlet will tell you about "OUR IMPROVED."

Manufacturers and Contractors
of

**Metal Fireproof Windows
CORRUGATED IRON**

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

A. B. ORMSBY LIMITED,

Cor. Queen and George Streets,
TORONTO, ONT.



This design a guarantee of quality

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IF YOU DO YOU SHOULD USE "CANADIAN-MADE" PAPER
All grades, from the highest "Glossy Finish" to the rough "Antique" and bulky "Featherweight."

YOUR PRINTER
CAN SUPPLY IT.

CANADA PAPER CO.
TORONTO LIMITED MONTREAL

METAL IS KING.

Wood for Ash Sifters is a back number. Metal and Wire replace it.

CUTTS' ALL-METAL ASH SIFTER

—Retails for 25c.—

is the best thing yet. Lives long, wears well—sells like hot cakes.

Send order at once for one, two, six, twelve dozen—more if you feel like it.

C. M. CUTTS & CO., Patentees, Toronto Junction, Ont.

**Pedlar's "Perfect" Metal Lath**

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.
24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.**

Everything counts, and the

POINTS IN FAVOR OF OUR GOODS

are many

Ready Roofing, Sheathing and Black  Diamond Tarred Felts,
Building Papers, Fibre and Manilla Wrappings, etc.

Ask for our quotations—they will interest you.

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLIETTE, QUE.

ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET,

MONTREAL

CURRENT MARKET QUOTATIONS.

Nov. 18, 1904.

RABBIT METAL.

These prices are for such qualities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.
Lamb and Flag and Strains—
56 and 28-lb. ingots, 100 lb. \$31 00 \$32 00

TINPLATES.
Charcoal Plates—Bright. Per box.
I.C. usual sizes..... \$6 50
I.X " "..... 8 00
I.X.X " "..... 9 50

Famous, equal to Bradley—
I.C. " "..... 6 75
I.X " "..... 8 25
I.X.X " "..... 9 75

Raven and Vulture Grades—
I.C. usual sizes..... 4 25
I.X " "..... 5 00
I.X.X " "..... 5 75
I.X.X.X " "..... 6 50

"Dominion Crown Best"—Double
Coated, Tissue. Per box.
I.C. " "..... 5 50
I.X " "..... 6 50
I.X.X " "..... 7 50

Allaway's Best"—Standard Quality.
I.C. " "..... 4 50
I.X " "..... 5 50
I.X.X " "..... 6 50

Coke Plates—Bright.
I.C. usual size, 14x20..... 3 35
I.C. special sizes, base..... 3 60
20x28..... 7 10

Charcoal Plates—Terne
Dean or J. G. Grade—
I.C. 20x28, 112 sheets..... 7 50
I.X, Terne Tin..... 10 50

Charcoal Tin Boiler Plates.
Cookley Grade—
X.X, 14x56, 50 sheet hzs. }
" 14x60, " " }
" 14x65, " " }..... 7 00

Tinned Sheets.
72x30 up to 24 gauge..... 7 25 7 50
" 26 " "..... 7 75 8 00

IRON AND STEEL.
Common bar, per 100 lb..... 1 75
Refined " "..... 2 05
Horseshoe Iron " "..... 2 30
Hoop steel, 14 to 3-in. base..... 2 75
Sleigh shoe steel, " "..... 2 10
Tire steel, " "..... 2 30 2 50

T. Firth & Son's tool steel, lb 0 12 1/2 0 13
B. K. Morton & Co.—
" Alpha " high speed..... 0 65
" " annealed..... 0 70
" M " Self-Hardening..... 0 50
" J " Standard..... 0 14
" B.C. " "..... 0 09

Jonas & Colver's tool steel..... 0 10 0 20
" " " "..... 0 65
" " annealed..... 0 70

Wm. Jessop & Sons—
High speed..... 0 60
Standard..... 0 14
Chas. Leonard..... 0 08 0 09

Crucible Steel Co.
" Rex high speed steel... 0 65 0 65
" Self Hardening..... 0 45 0 50
" Special..... 0 17
" Silver steel..... 0 11
" Black Diamond..... 0 12 0 13

Sanderson's Crucible steel..... 0 09 0 09
" Superior " "..... 0 12 0 13

Syracuse Smelting Works:
Aluminum, genuine..... 0 45
Government, "..... 0 45
Tough, "..... 0 40
Hard, "..... 0 40
Dynamo..... 0 30
Special..... 0 25
Harmony..... 0 22
Car Box..... 0 20
Extra..... 0 15

The Canada Metal Co.:
Imperial, genuine..... 0 40
Metallic..... 0 30
Hercules..... 0 20
Star..... 0 15
No. 1..... 0 12
No. 2..... 0 10
No. 3..... 0 06
No. 4..... 0 05

BLACK SHEETS.
Montreal. Toronto
10 gauge..... 2 30 2 30
12 and 14 gauge..... 2 30 2 35
17 " "..... 2 30 2 40
22 to 24 gauge..... 2 35 2 50
26 " "..... 2 40 2 65
28 " "..... 2 40 2 70

COPPER WIRE.
Discount, 50 per cent.

CANADA PLATES.
Ordinary..... 2 40
All bright..... 3 30
Galvanized Canada Plates—
Ordinary. Dom.
18x24x52..... 4 25 4 35
" 60..... 4 50 4 60
20x28x80..... 8 50 8 70
" 94..... 9 00 9 20

GALVANIZED SHEETS. Queen's
Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge..... 3 65
18 to 24 gauge..... 3 75 3 80 3 75 3 50
26 " "..... 4 00 3 75 3 90 3 75
28 " "..... 4 25 4 00 4 05 4 00

American brands, \$4.00 for 10 1/2 oz.
Less than case lots 10 to 15c. extra.

CHAIN.
Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 5-16 " "..... 4 45 5 60
" 7-16 " "..... 3 85 3 70
" 9-16 " "..... 3 55 3 45
" 1-2 " "..... 3 35 3 25
Halter, kennel and post chains, 40 to 40 and
5 per cent.
Cow ties..... 40 p.c.
Tie out chains..... 65 p.c.
Stall fixtures..... 35 p.c.
Trace chain..... 45 p.c.
Jack chain, iron, single and double, discount
35 p.c.
Jack chain, brass, single and double, dis-
count 40 p.c.

COPPER.
Ingot. Per 100 lb.
Casting, car lots..... 14 75 15 00
Bars.
Cut lengths, round, 1/2 to 1 in. 21 00 23 00
" round and square, 1 to 2 inches..... 21 23 00
Sheet.
Plain, 16 oz., 14x48 and 14x60..... 20 00
Plain, 14 oz..... 21 00
Tinned copper sheet..... 24 00
Planished..... 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 " "..... 0 21
" 50-lb. and above " "..... 0 20

BOILER AND T.K. PITTS.
Plain tinned, per lb..... 0 28
Spun, per lb..... 0 32

BRASS.
Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4..... 0 23
Tubing, base, per lb..... 0 23 1/2

ZINC SPELTER.
Foreign, per 100 lb..... 6 00 6 25
Domestic " "..... 5 50 5 75

ZINC SHEET.
5-cwt. casks..... 6 75 7 00
Part casks..... 7 00 7 50

LEAD.
Imported Pig, per 100 lb..... 3 40 3 60
Bar, per lb..... 0 05
Sheets, 2 1/2 lb. sq. ft., by roll..... 0 08 1/2
Sheets, 3 to 6 lb. " "..... 0 06
NOTE.—Cut sheets 1/2 c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. f.o.b. Toronto.
NOTE.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.
Cookson's..... per lb. 7 50 8 00

SHOT.
Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count, 17 1/2 p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.
Zinc..... 6 00
Copper, discount 20 per cent. off revised list.

BATHS.
Standard Ideal Enameled.
5 1/2-ft. 2 1/2 in. rolled rim, 1st quality..... 21 25
5 1/2 " " 2nd " "..... 17 25

CLOSETS. Net.
Fittings..... 1 00
Plain Simplex Siphon Jet..... 9 50
Emb..... 1 25
Fittings..... 1 25
Low Down Elgin or Leutonic, plain..... 6 00
Low " " emb..... 6 50
Connection..... 1 25
Plain Richelieu..... 4 25
Emb..... 4 50
Connections..... 1 25
Basins, P.O., 14-in..... 0 63
Basins, oval, 17 x 14-in..... 1 50
Basins, " 19 x 15-in..... 2 00

IRON PIPE. Per 100 feet.
Black pipe—
1 inch..... 1 97
" "..... 2 15
" "..... 2 28
" "..... 2 86
" "..... 4 10
" "..... 5 62
" "..... 6 72
" "..... 8 98
2 1/2 " ".....
3 " ".....
3 1/2 " ".....
4 " ".....
4 1/2 " ".....
5 " ".....

Galvanized pipe—
1 inch..... 2 30
" "..... 2 86
" "..... 3 14
" "..... 4 01
" "..... 5 75
" "..... 7 85
" "..... 9 43
" "..... 12 57

Malleable Fittings—Discount 20 p.c.
Cast Iron Fittings—
Standard, 57 1/2 per cent.; unions, 55 per cent.;
on nipples, headers and flanged unions, 60
per cent.

PLUMBERS' BRASS GOODS.
Standard Compression work, dis. 40 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra dis-
count 10 per cent.

Lever handle Stops and Waste, discount 60
per cent. With in lots of 2 dozen and over,
an extra discount of 10 per cent.

J.M.T. Globe, Angle and Check Valves, dis-
count 55 per cent.
Standard Globe, Angle and Check Valves,
discount 65 per cent.

Kerr's special standard globes and angles,
discount 60 per cent.
Kerr's Jenkin disc, copper-alloy disc and
heavy standard valves, discount 60 per cent.

Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator
valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radia-
tor valves, discount 70 per cent.
Kerr's quick-opening hot-water radiator
valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate
valves, brass, discount 55 per cent.
Weber's (Kerr) patent straightway gate
valves, I.B.B.M., discount 70 per cent.

J.M.T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 65 per
cent.

Patent Quick-Opening Valves, discount 70
per cent.
No. 1 compression bath cock..... net 1 75
No. 4 " "..... 1 90
No. 7 Fuller's..... " 2 10
No. 4 1/2 " "..... " 2 25

Patent Compression Cushion, basin
cock, hot and cold..... per doz. 15 00
Patent Compression Cushion, bath
cock, No. 2208..... " 2 25
Square head brass cocks, discount 55 per cent
" iron " 50 to 60

Thompson Smoke-test Machine \$25.00

RANGE BOILERS.
Copper, 30 gallon..... " 22 00
" 40 " "..... " 24 00
" 40 " "..... " 28 00

Discount off copper boilers 15 per cent.

SOIL PIPE AND FITTINGS.
Light soil pipe, discount, 50 per cent.
" fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60
per cent.
and 8-in. pipe, discount 40 and 5 per cent.

SOLDER. Per lb.
Bar, half-and-half, guaranteed..... 0 25
Bar, half-and-half, commercial..... 0 17

WRENCHES.
Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 20 to 25 per cent.

Towers' Engineer..... each 2 00 7 00
" S..... per doz. 5 80 6 00
G. & K.'s Pipe..... " 3 40
Burrell's Pipe..... each 3 00
Pocket..... per doz. 6 35 2 90

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.	
Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 68
French "	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity 4c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 33 p.c.	2 00
Burnt sienna	9 00
" umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	9 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.	
Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators Pure	4 75
Monarch	5 00
Decorators Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs, per cwt	4 75	
No. 1, 560 lb. casks, per cwt	4 40	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.), kegs	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co's pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
France-Frost Co.'s "Ark" and	1 25
"British Navy deck"	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PATTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
" rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 30	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
" orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
" black japan	1 10	1 20
No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granitine floor finish, per gal	2 75	
Maple Leaf coach enamels: size 1, \$1.20; size 2, 70c; size 3, 40c. each		
Sherwin-Williams' kopal varnish, assorted case, from to 1 gal., \$2.50.		

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 19	0 20
Coopers	0 12	0 16
Hutiner		
Ground		
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 25 per cent.	
American \$2.00 per 1000.	
C. B. Caps American, \$2.60 per 1000.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 20 per cent. to list.	
B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, list net Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American 10 per cent. advance on list.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

Best thick brown or grey felt wads, in ½ lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.

Woodyatt Hudson, per doz., net	4 50
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AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.	
Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit, " "	10 00 18 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50 6 00
Boys' Axes	6 25 7 00
Splitting Axes	7 00 12 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys' handled	5 75
" hunters	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.

Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	

American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.

Gongs, Sargent's	5 50 8 00
" Peterboro', discount 50 and 10 per cent. off new list.	

Farm.

American, each	1 25 3 00
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House.

American, per lb.	0 35 0 40
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BELLOWS.

Hand, per doz.	3 35 4 75
Moulders, per doz.	7 50 10 00
Blacksmiths', discount 40 per cent.	

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per	

Agricultural, not wider than 4 in., 75 per cent.	
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Auger.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.

Gilmour's, 47½ per cent.	
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Expansive.

Clark's, 40 per cent.	
Clark's, per doz	0 65 0 90
Diamond, Shell, per doz	1 00 1 50
Nail and Spike, per gross	2 25 5 20

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½ 0 12
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BOLTS AND NUTS.

Carriage Bolts, common (\$1 list)	
" " 3-16 and ½"	60 and 10
" " 5-16 and ½"	55 and 5
" " 7-16 and up	55 and 5
" " full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up. #	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

BOOT CALKS.

Small and medium, ball	per M. 4 25
Small heel	" 4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.	
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BUTCHERS' CLEAVERS.

German	per doz. 6 00	9 00
American	" 12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz. 0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb.	
per roll	0 90
Ready roofing, 3-ply, not under 65 lb.	
per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 55
Dry Fibre	" 400 " 0 50
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 400 " 1 00
Oiled	" 400 " 0 70
Roof Coasting, in barrels	per gal. 0 17
Roof small packages	0 25
Refined Tar	per barrel 5 00
Coal Tar	per gal. 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 00

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.9	or 2-inch.
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BUTTS.

Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 60 per cent.	

Wrought Steel.

Fast Joint, discount 70 to 70 and 5 per cent.	
Loose Pin, discount 70 to 70 and 5 per cent.	

CARPET STRETCHERS.

American	per doz. 1 00	1 50
Bullard's	" 6 50	

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross 7 50	8 50
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CHALK.

Carpenters' Colored, per gross	0 45	0 75
White lump	per cwt. 0 60	0 65
Red	" 0 05	0 06
Crayon	per gross 0 14	0 18

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,	per doz \$4 00
" " " 25c. pkgs., "	" 2 00
" " " 10c. "	" 75
" " " 25-lb. pail, each	1 80
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz.	1 25
Worm	1 25
International Stock Foods, \$1 packages,	per doz. 8 00
International Stock Foods, per pail	2 75
" " " per bbl.	10 50
" Poultry " \$1 pkgs., per doz.	8 00
" Worm Powders, 50c. pkgs.	4 00
" Pine Healing Oil, per doz	8 00
" Pheno Chloro, \$1 pkgs., per doz	8 00
" Hoof Ointment	8 00
" Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz	

CLOTHES REELS.

Davis Clothes Reels, dis. 40 per cent.	
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An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.			GAUGES.			Clothes line, No. 61..			Cabinet.		
Plain or Corrugated.			Marking, Mortise, Etc.			Harness.....			Eagle, discount 30 per cent.		
2-inch.....	per 100 feet	3 00	Stanley's, discount 50 to 55 per cent.			Hat and coat..... per gro.			Padlocks.		
3 ".....	"	4 00	Wire Gauges.			Chandelier..... per doz.			English and Am..... per doz.		
4 ".....	"	5 25	Winn's, Nos. 26 to 33.....each			Wrought Iron.			Eagle, discount 20 to 25 per cent.		
5 ".....	"	6 75	GILLET'S POWDERED LYE.			Wrought hooks and staples			MACHINE SCREWS.		
6 ".....	"	9 00	1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.			discount 60 per cent.			Iron and Brass.		
CRADLES, GRAIN.			HALTERS.			Wire.			Flat head, discount 25 per cent.		
Canadian, discount 20 to 25 per cent.			Rope, 1-inch..... per gross			Hat and coat, discount 60 per cent.			Round head, discount 20 per cent.		
CROSSCUT SAW HANDLES.			Rope, 1/2.....			Belt..... per 1,000			MALETS.		
S. & D., No. 3.....	per pair	0 17 1/2	Rope, 1/2 to 1-inch.....			Screw, bright, discount 60 per cent.			Tinmiths'..... per doz.		
S. & D., " 5.....	"	0 22 1/2	Leather, 1-inch..... per doz.			HORSE NAILS.			Carpenters' hickory, " 1 25 3 75		
S. & D., " 6.....	"	0 15	Leather, 1 1/2.....			"P.B." Brand, 55 to 60 per cent.			Lignum Vitae..... " 3 85 5 00		
Boynton pattern.....	"	0 20	Web.....			"M" brand, 55, per cent.			Caulking, each..... 0 60 2 00		
DOOR SPRINGS.			HAMMERS.			"Monarch," 50 and 7 1/2 per cent.			MATTOCKS.		
Torrey's Rod.....	per doz.	1 85	Nail.			"Peerless" 50 per cent. dis.			Canadian..... per doz.		
Coil, 9 to 11 in.....	"	0 95	Maydole's, discount 5 to 10 per cent. Canadian			F.O.B. Montreal			American, discount 3 1/2 per cent.		
English.....	"	2 00	discount 25 to 27 1/2 per cent.			"P.B." brand, new pattern, base..... \$3 50			German, 15 per cent.		
DRAW KNIVES.			TACK.			"M." brand, base..... 3 65			Gem..... each..... 1 15		
Coach and Wagon, discount 50 per cent.			Magnetic..... per doz.			Add 15c. Toronto, Hamilton, Guelph.			MILK CAN TRIMMING.		
Carpenters' discount 60 and 10 per cent.			Canadian..... per lb.			JAPANNED WARE.			Discount 25 per cent.		
DRILLS.			English and Canadian, per lb.			50 per cent.			NAILS.		
Hand and Breast.			0 23 0 25			PICKS.			Cut.		
Miller's Falls, per doz., net list.			HANDLES.			Star..... per doz.			2d.....		
DRILL BITS.			Axe, 2nd growth, per doz. net			C. & B., discount 40 per cent., revised list.			3d.....		
Morse, discount 37 1/2 to 40 per cent.			Store door..... per doz.			Hoe.			4 and 5d.....		
Standard, discount 50 and 5 to 55 per cent.			Fork.			C. & B., discount 40 per cent., revised list.			6 and 7d.....		
FAUCETS.			C. & B., discount 40 per cent., revised list.			Saw.			8 and 9d.....		
Common, cork-lined, discount 35 per cent.			American..... per doz.			Plane.			10 and 12d.....		
EAVETROUGHES.			American..... per gross			Hammer and Hatchet.			16 and 20d.....		
10-inch..... per 100 ft.		10 00	Canadian, discount 40 per cent.			Canadian, discount 40 per cent.			30, 40, 50 and 60d (base).....		
ELBOWS (stovepipe.)			HANGERS.			KNOBES.			Cut nails in carlots 5c. less.		
5 and 6-inch, common..... per doz.		1 20	Steel barn door.....			Door, japanned and N.P., per			Wire nails in carlots are \$2.20 (base).		
7-inch.....	"	1 35	Sterns, 4-inch.....			doz.			Steel cut nails 10c. extra.		
Polished, 15c. per dozen extra.			5-inch.....			Bronze, Berlin..... per doz.			Miscellaneous wire nails, discount 75 per cent.		
ESCUTCHEONS.			Zenith.....			Bronze, Genuine.....			Coopers' nails, discount 30 per cent.		
Discount 50 and 10 per cent., new list			Lane's covered—			Shutter, porcelain, F. & L.			NAIL PULLERS.		
ESCUTCHEON PINS.			No. 11, 5-foot run.....			screw..... per gross			German and American.....		
Iron, discount 40 per cent.			No. 11 1/2, 10-foot run.....			White door knobs..... per doz.			..... 1 75 2 50		
FACTORY MILK CANS.			No. 12, 10-foot run.....			HAY KNIVES.			NAIL SETS.		
Discount off revised list, 40 per cent.			No. 14, 15-foot run.....			Net prices.			Square, round and octagon,		
FILES AND RASPS.			Steel, covered.....			LAMP WICKS.			per gross.....		
Great Western..... 70 and 10 per cent.			" track, 1 x 3-16 in (100 ft.).....			Discount, 60 per cent.			Diamond.....		
Arcade..... 70 " "			1 1/2 x 3-16 in (100 ft.).....			LADDERS, EXTENSION.			1 00		
Kearney & Foot..... 70 " "			HARVEST TOOLS.			Wagoner Extension Ladders, dis. 40 per cent.			POULTRY NETTING.		
Dixson's..... 70 " "			Discount 60 per cent.			LANTERNS.			2-in. Mesh, 19 w.g., dis. 60 per cent.		
American..... 70 " "			HATCHETS.			Cold Blast..... per doz.			2-in. Mesh, 16 w.g. and heavier, 50 p.c.		
J. Barton Smith..... 70 " "			Canadian, discount 40 to 42 1/2 per cent.			No. 3, "Wright's".....			OAKUM.		
McClellan..... 70 " "			Shingle, Red Ridge 1, per doz.....			Ordinary, with O burner.....			U. S. Navy..... per 100 lb.		
Eagle..... 70 " "			Barrel, Underhill.....			Dashboard, cold blast.....			Plumbers.....		
Nicholson, 60 and 10 to 60, 10 and 5			" 2.....			No. 0.....			OILERS.		
Royal..... 80 " "			HAT ENAMEL.			Japanning, 50c. per doz. extra.			McClary's Model galvanized		
Globe..... 70 to 75			Henderson & Potts' "Anchor Brand"			LEMON SQUEEZERS.			oil can, with pump, 5 gallon,		
Black Diamond, 60 and 10 to 60, 10 and 5 per			HINGES.			Porcelain lined..... per doz.			per dozen.....		
cent.			Blind, Parker's, discount 60 per cent.			Galvanized.....			Davidson oilers, discount 40 per cent.		
Jowitt's, English list, 25 to 27 1/2 per cent.			Heavy T and strap, 4-in., per lb.....			King, wood.....			Zinc and tin, discount 50, 50 and 10 per cent.		
Nicholson File Co.'s "Simplicity" file handle,			" " 5-in., ".....			King, glass.....			Copper..... per doz.		
per gross 85c. to \$1.50			" " 10-in., ".....			All glass.....			Brass.....		
GLASS.			Light T and strap, discount 65 and 5 per cent.			LAWN MOWERS FOR 1905.			Malleable, discount 25 per cent		
Window. Box Price.			Screw hook and hinge.....			Woodyatt, 10 1/2-in., 14-in. cut			GALVANIZED PAIS.		
Size United	Per	D. Diamond	6 to 10 in..... per 100 lb.			Star, 9-in.			Dufferin pattern pais, discount 45 per cent		
Inches.	50 ft.	100 ft.	12 in. up.....			Deley, 8-in.			Flaring pattern, discount 45 per cent.		
Under 26.....	3 80	5 06	Spring, No. 20, per gro. pairs			Philadelphia, 7 1/2-in.			Galvanized washtubs, discount 45 per cent.		
26 to 40.....	4 00	5 44	Spring, Woodyatt pattern, per gro. No. 5,			Grass Boxes.....			PIECED WARE.		
41 to 50.....	4 50	6 56	\$17.50; No. 10, \$18; No. 20, \$10.80; No.			King Edw'd, 12-in., 14-in. cut			Discount 40 per cent off list, June, 1899.		
51 to 60.....	4 75	7 50	120, \$20; No. 51, \$10; No. 50, \$27.50.			Horse Lawn Mowers, "Special."			10-qt. flaring sap buckets, discount 40 per cent.		
61 to 70.....	5 00	8 62	HOES.			Discount, 50 per cent., with freight conces-			6, 10 and 14-qt. flaring pails, dis. 40 per cent.		
71 to 80.....	5 30	9 38	Garden, Mortar, etc., discount 60 per cent.			sions in quantity shipments.			Creamer cans, discount 40 per cent.		
81 to 85.....	10 75		Planter..... per doz.			Maxwell & Sons:			PICKS.		
86 to 90.....	12 30		Tinned case, 35 per cent.			10 1/2-in. high wheel.....			Per dozen.....		
91 to 95.....	15 00		HOLLOW WARE.			9-in.....			Porcelain head..... per gross		
96 to 100.....	18 00		HOOKS.			8-in.....			Brass head.....		1 00
CAST IRON.			Bird cage..... per doz.			Canadian, 50 to 50 and 10 per cent.			PICTURE WIRE.		
Bird cage..... per doz.			0 50 1 10			Russell & Erwin..... per doz.			Tin and gilt, discount 75 per cent.		

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DO MORE—MAKE MORE.

But how? That's the Question.

We'll answer it. By using our Office Labor-Saving Systems. Don't try every new system that comes out. Get the TRIED one, the systems used by prosperous business houses, that's the argument which convinces. Our Card Systems and Office Labor-Saving Devices are doing this daily. If you don't use them install them now. You're losing money without them. Full line of Office Furniture in stock.

THE OFFICE SPECIALTY MFG. CO., Limited

55 YONGE STREET,

New premises—almost ready—97-103 Wellington W.,

THE BUSINESS GETTER

Factories—Newmarket.

TORONTO.

PLANE IRONS.
English per doz. 2 00 5 00

PLIERS AND NIPPERS.
Button's genuine, per doz. pairs, discount 37½ to 40 per cent.
Button's imitation per doz. 5 00 9 00
German " 0 60 0 60

PRESSED SPIKES.
Discount 20 per cent.

PULLEYS.
Hothouse per doz. 0 55 1 00
Axle " 0 22 0 33
Screw " 0 27 1 00
Awning " 0 35 2 50

PUMPS.
Canadian cistern 1 80 3 60
Canadian pitcher spout 1 40 2 10

PUNCHES.
Saddler's per doz. 1 00 1 85
Conductors' " 3 00 15 00
Finners', solid per set 0 72
" hollow per inch 1 00

RAKES.
Wood per doz. net 1 20 up.

RAZORS. per doz.
Elliot's 4 00 18 00
Geo. Butler's & Co.'s 4 00 18 00
Boker's 7 50 11 00
" King Cutter 13 50 18 50
Wade & Butcher's 3 60 10 00
Carbo Magnetic 15 00 10 75
Griffon Barber's Favorite 13 00
Griffon No. 65 13 50
Griffon Safety Razors 13 50
Griffon Strapping Machines 13 50
Lewis Bros' "Klean Cutter" 8 50 10 50
Hindoo 10 50 14 00
Orgateon's Swedish 3 50 10 00
Claus, 50 and 10 per cent.
Claus, 50 and 10 per cent.

REGISTERS.
Discount 40 per cent.

RIVETS AND BURMS.
Iron Rivets, black and tinned, 60 and 10 p. c.
Iron Burrs, discount 55 per cent.
Copper Rivets, with usual proportion burrs, 45 per cent.
Copper Burrs only, discount 30 and 10 per cent.
Extras on Tinned or Coppered Rivets, 4-lb. packages 1c. per lb.; 4-lb. packages 2c. lb.

RIVET SETS.
Canadian, discount 35 to 37½ per cent.

ROPE, ETC.
Sisal 0 11
Pure Manila 0 14
" British " Manila 0 11
Cotton, 3-16 inch and larger 0 21 0 22
" 5-32 inch 0 25 0 27
" 1 inch 0 25 0 28
Russia Deep Sea 0 16
Lute 0 09
Jute Yarn, single 0 10
" double 0 10
Sisal bed cord, 48 feet per doz. 0 65
" 60 feet " 0 80
" 72 feet " 0 95

RULES.
B. & A. sand, discount 70 per cent.
" " discount 20 to 25 per cent.

SAD IRONS.
Mrs. Potts, No. 55, polished per set 0 80
" No. 50, nickel-plated, " 0 90
Common, plain 4 50
" plated 5 50

SAND AND EMERY PAPER.
B. & A. sand, discount, 40 and 5 per cent.
Emery, discount 40 per cent.
Garnet (Burton's) 5 to 10 per cent. advance on list

SAP SPOUTS.
Bronzed iron with hooks per 1,000 7 50
"Eureka" tinned steel, hooks 8 00

SAWS.
Hand, Diaston's, discount 12½ per cent.
S. & D., discount 40 per cent.
Crosscut, Diaston's, per foot 0 35 0 55
S. & D., discount 35 per cent. on Nos. 2 and 3.
Hack, complete each 0 75 2 75
" frame only each 0 50 1 25

SASH WEIGHTS.
Sectional per 100 lb. 2 00 2 25
Solid " 1 50 1 75

SASH CORD.
Per lb. 0 28 0 30

SAW SETS. per doz.
Lincoln and Whiting 4 75
Hand Sets, Perfect 4 00
X-Cut Sets, 7 50

SCALES.
Gurney Standard, 40 per cent.
Gurney Champion, 50 per cent.
Burrow, Stewart & Milne
Imperial Standard, discount 40 per cent.
Weigh Beams, discount 35 per cent.
Champion Scales, discount 50 per cent.
Fairbanks standard, discount 35 per cent.
" Dominion, discount 55 per cent.
" Richelieu, discount 55 per cent.
Warren's new Standard, discount 40 per cent.
Champion, discount 50 per cent.
" Weighbeams, discount 35 per cent.

SCREW DRIVERS.
Sargent's per doz. 0 65 1 00

SCREEN DOORS.
Common doors, 2 or 3 panel, walnut stained, 4-in. style per doz. 6 50
Common doors, 2 or 3 panel, yellow and green stained, 4-in. style per doz. 6 75
Common doors, 2 or 3 panel, in natural colors, oil finish per doz. 8 75
3-in. style 20c. per dozen less.

SCREWS.
Wood, F. H., bright and steel, discount 87½ per cent.

Wood, R. H., bright, dis. 82½ per cent.
" F. H., brass, dis. 80 per cent.
" R. H., dis. 75 per cent.
" F. H., bronze, dis. 75 per cent.
" R. H., dis. 70 per cent.
Drive Screws, dis. 87½ per cent.
Bench, wood per doz. 3 25 4 00
" iron " 4 25 5 00
Set, case hardened, dis. 60 per cent.
Square Cap, dis. 50 and 5 per cent.
Hexagon Cap, dis. 45 per cent.

SCYTHES.
Per doz. net 6 00 9 00

SCYTHE SNATHS.
Canadian, discount 40 per cent.

SHEARS.
Claus, nickel, discount 80 per cent.
Claus, Japan, discount 67½ per cent.
Claus, tailors, discount 40 per cent.
Seymour's, discount 50 and 10 per cent.

SHOVELS AND SPADES.
Canadian, discount 45 per cent.

SINKS.
Castiron, 16 x 24 0 85
" 18 x 30 1 00
" 18 x 36 1 40

SNAPS.
Harness, German, discount 25 per cent.
Lock, Andrews 4 50 11 50

SOLDERING IRONS.
1, 1½-lb. per lb. 0 37
2-lb. or over 0 34

SQUARES.
Iron, No. 492 per doz. 1 90 2 25
" No. 493 " 2 40 2 55
" No. 494 " 3 25 3 40

STEEL, discount 60 and 5 to 65 per cent.
Try and Bevel, discount 50 to 52½ per cent.

STAMPED WARE.
Plain, discount 75 and 12½ per cent. off revised list.
Retinned, discount 75 per cent. off revised list.

STAPLES.
Galvanized 3 00
Plain 2 80
Coopers', discount 45 per cent.
Poultry netting staples, discount 40 per cent.
STOCKS AND DIES.
American discount 25 per cent.

STONE.
Washita per lb. 0 28 0 60
Hindostan " 0 06 0 07
" slip " 0 59 0 09
Labrador " 0 13
" Axe " 0 15
Turkey " 0 50
Arkansas " 1 50
Water-of-Ayr " 0 10
Scythe per gross 3 50 5 00
Grind, 40 to 200 lb. per ton 25 00
" under 40 lb. 28 00
" 200 lb. and over 31 00

STOVEPIPES.
5 and 6 inch, per 100 lengths 7 00
7 inch 7 50

TACKS, BRADS, ETC.
Carpet tacks, blued 80 and 15
" " tinned 80 and 20
" " (in kegs) 40
Cut tacks, blued, in dozens only 60
" ½ weights 60
Swedes cut tacks, blued and tinned 80 and 10
In bulk 75
In dozens 85, 12½ and 12½
Swedes, upholsterers', bulk 12½ and 12½
" brush, blued and tinned 70
Swedes, gimps, blued, tinned and japanned 75 and 12½
Zinc tacks 35
Leather carpet tacks 55
Copper tacks 50
Copper nails 52½
Trunk nails, black 65 and 5
Trunk nails, tinned 65 and 10
Clout nails, blued 65 and 5
Chair nails 35
Patent brads 40
Fine finishing 40
Lining tacks, in papers 15
" " in bulk 15
" " solid heads, in bulk 15
Saddle nail, in papers 15
" in bulk 15
Tufting buttons, 22 line, in dozens only 60
Zinc glaziers' points 5
Double pointed tacks, papers 90 and 10
" bulk 40
Olinch and duck rivets 45

TAPE LINES.
English, ass skin per doz. 2 75 5 00
English, Patent Leather 5 50 9 75
Chesterman's each 0 90 2 85
" steel each 0 80 8 00

TINNERS' SNIPS.
Per doz. net 3 00 15 00
Claus, discount 35 per cent.

THERMOMETERS.
Tin case and dairy, 75 to 75 and 10 per cent.

TRAPS (steel).
Game, Newhouse, discount 25 per cent.
Game, H. & N., P. S. & W., 65 per cent.
Game, steel, 72½, 75 per cent.

TROWELS.
Diaston's, discount 10 per cent.
German per doz. 4 75 6 00
S. & D., discount 35 per cent.

TWINES.
Rag, Russian per lb. 0 27
Wrapping, cotton, 3-ply 0 24
" 4-ply 0 27
Mattress per lb. 0 33 0 45
Staging 0 27 0 35

VICES.
Wright's 0 13
Brook's 0 12
Pipe Vice, Hinge, No. 1 3 50
" No. 2 5 50
Saw Vice 4 50 9 00

COLUMBIA HARDWARE CO.
Blacksmiths' (discount) 60 per cent.
" parallel (discount) 45 per cent.

ENAMELLED WARE.
White, Princess, Turquoise, Blue and White discount 50 per cent.
Diamond, Famous, Premier, discount 50 and 10 per cent.
Granite or Pearl, Imperial, Crescent, discount 50, 10 and 10 per cent.
Premier steel ware, 40 per cent.
"Star" decorated steel and decorated white, 25 per cent.

WIRE.
Smooth Steel Wire. \$2 25
No. 0-9 gauge 60. extra.
10 " 120. "
11 " 20c. "
12 " 30c. "
13 " 40c. "
14 " 55c. "
15 " 70c. "
16 " 70c. "

Add 60c. for coppering and 22 for tinning.
Extra net per 100 lb. Oiled wire 10c., spring wire \$1.25, special hay baling wire 30c., best steel wire 75c., bright soft drawn 15c., charcoal (extra quality) \$1.25, packed in casks or cases 15c., bagging and papering 10c., 50 and 100-lb. bundles 10c., in 25-lb. bundles 15c., in 5 and 10-lb. bundles 25c., in 1-lb. hanks, 50c., in 1-lb. hanks 75c., in 1-lb. hanks \$1.

Fine Steel Wire, discount 27½ per cent.
List of extras: In 100-lb. lots: No. 17, \$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No. 24, \$8—No. 25, \$8.50—No. 26, \$9—No. 27, \$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34, \$17. Extras net—tinned wire, Nos. 17-25, \$2—Nos. 26-31, \$4—Nos. 32-34, \$5. Coppered, 5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5 and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.—in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—packed in casks or cases, 15c.—bagging or papering, 10c.

Brass wire, discount 60 per cent. off the list.
Copper wire, discount 60 per cent. net cast 30 days, f.o.b. factory.

Galvanized wire, per 100 lb.—Nos. 4 and 5, \$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15—No. 9, \$2.55—No. 10, \$3.20 to \$3.20—No. 11, \$3.25 to \$3.25—No. 12, \$2.45—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No. 15, \$4.30—No. 16, \$4.30. Base sizes, Nos. 6 to 9, \$2.27½ f.o.b. Cleveland. In carlots 12½c. less.

Clothes Line Wire, regular 7 strand, No. 17, \$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow 6 strand, No. 17, \$4.30; No. 18, \$2.70; No. 19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton, Toronto, Montreal.

WIRE FENCING.
Galvanized barb 2 50 2 75
Galvanized, plain twist 2 50 2 75
Galvanized barb, f.o.b. Cleveland, \$2.25 to \$2.50 in less than carlots, and \$2.45 in carlots.

COILED SPRING WIRE.
High Carbon, No. 9 \$2 70
" No. 11 3 30
" No. 12 2 95

WIRE CLOTH.
Painted Screen, per 100 sq. ft., net 1 50
Terms, 2 per cent. off 30 days.

WASHING MACHINES.
Round, re-acting per doz. 55 00
Square 60 00
Eclipse, per doz 48 00
Dowdell 36 00
New Century, per doz 72 00
Connor Improved 35 00
Daisy 48 00

WRINGERS.
Royal Canadian per doz. 30 00 33 00
" 24 00
Royal American 24 00
Sampson 24 00
Lightning 27 00

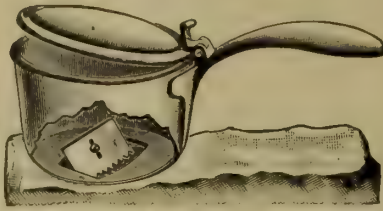
TERMS, 4 months, or 3 per cent. 30 days.

WROUGHT IRON WASHERS.
Canadian make, discount 40 per cent.

STANDARD "ENTERPRISE"

ICE SHREDDERS

For Shaving Ice, Coarse or Fine.



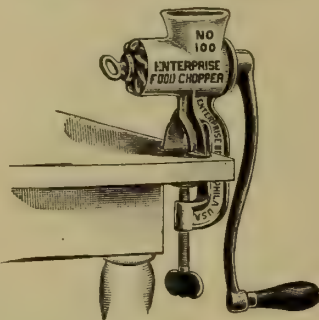
No. 33, Tinned,	-	\$6.00
No. 34, Nickeled,	-	15.00

LAWN SPRINKLER



No. 1,	-	\$3.50
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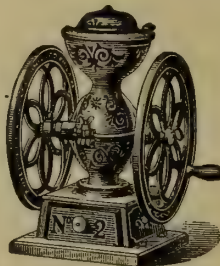
FOOD CHOPPERS



No. 100	-	\$1.50
No. 300	-	2.25

Rapid Grinding and Pulverizing Mills

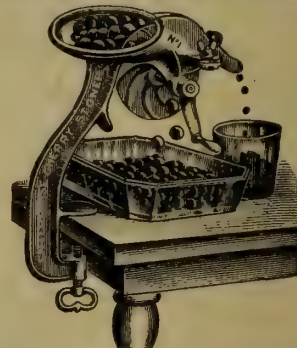
45 Sizes and Styles for Hand, Steam and Electric Power.



No. 2,	-	\$3.75
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CHERRY STONERS

5 Sizes and Styles, Tinned or Japanned



No. 1,	-	\$7.50 per Doz.
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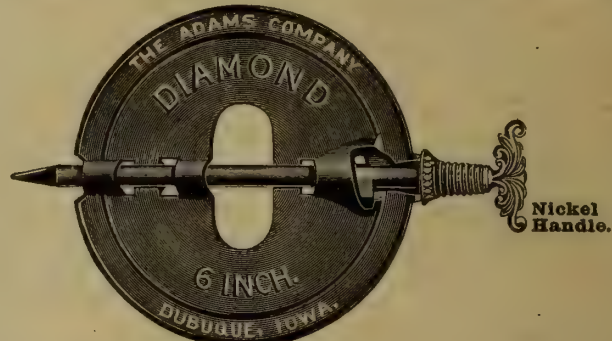
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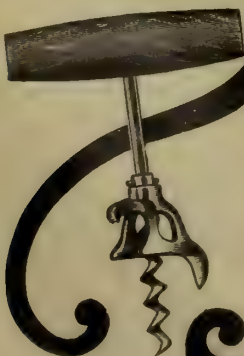
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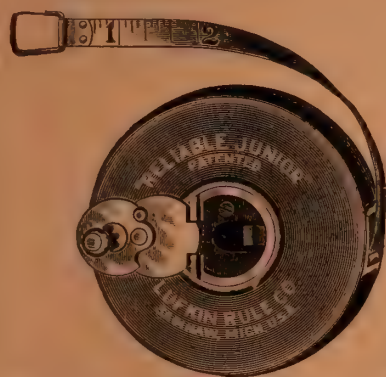
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VOL. XVI.

MONTREAL AND TORONTO, NOVEMBER 26, 1904

NO. 48

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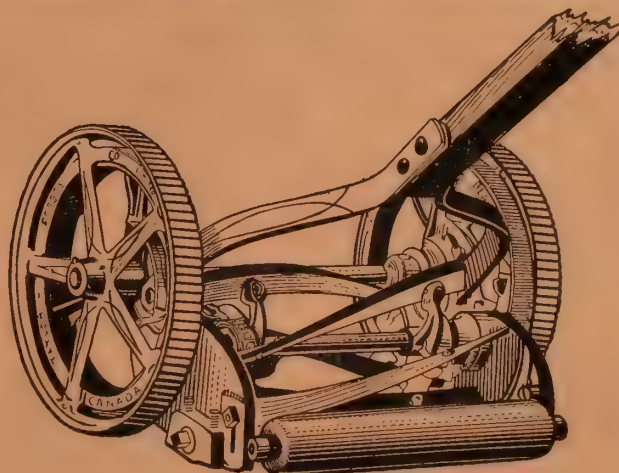
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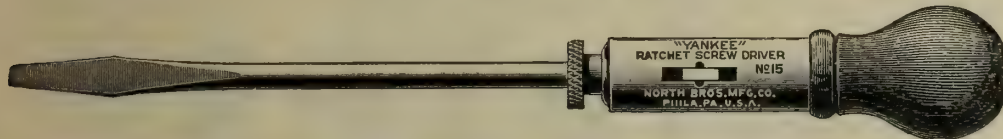
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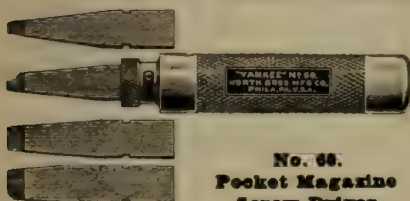
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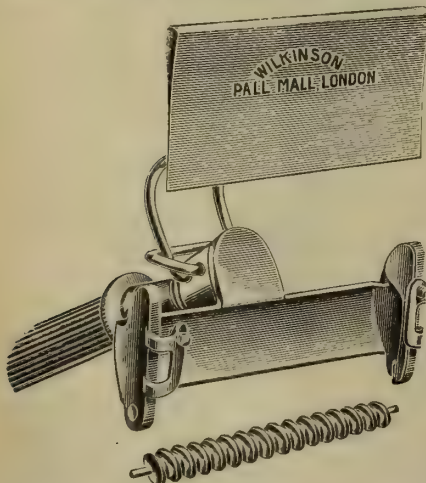
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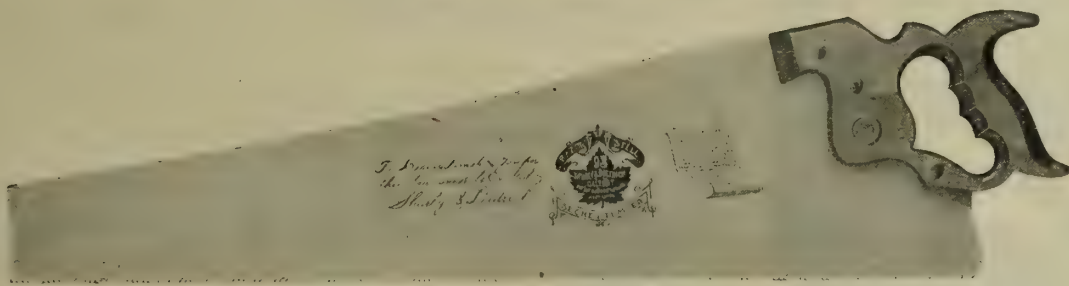
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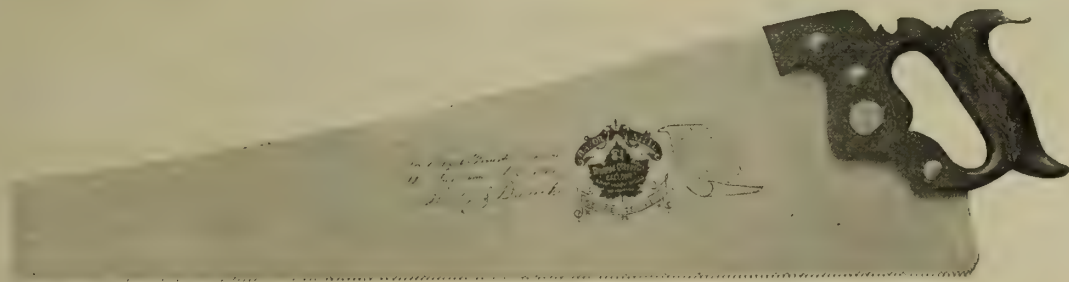
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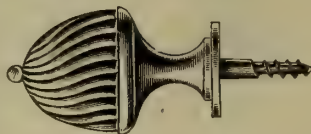
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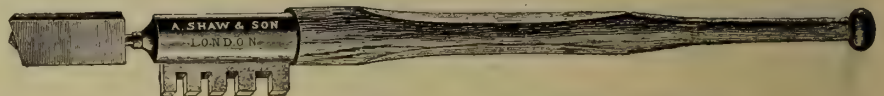
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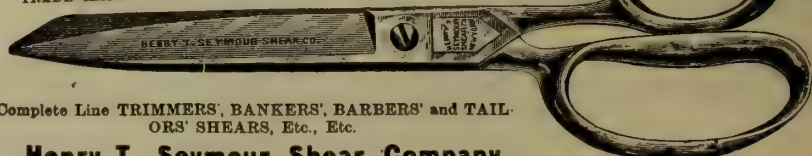
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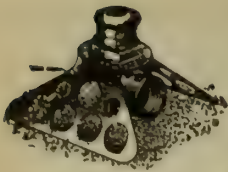
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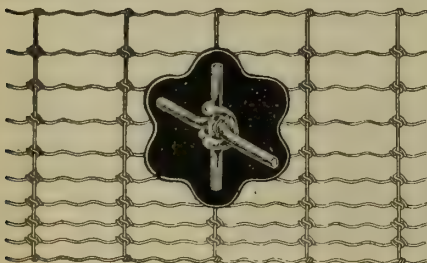
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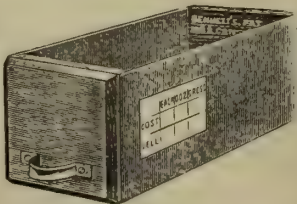
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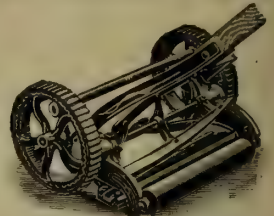
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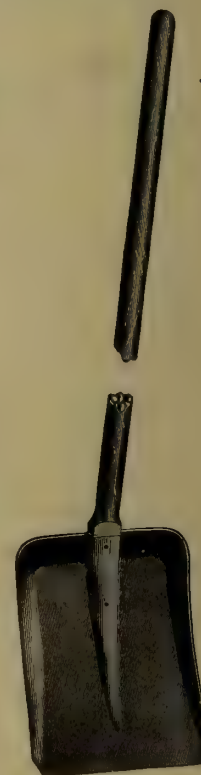
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**Strong and
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The Water Supply of Modern City Buildings.

By W. P. Gerhard,
in *Cassier's Magazine*.

THE mechanical equipment of modern large buildings has been the topic of many discussions in recent years, but while much attention has been given to the steam boiler plant, the heating and ventilating system, the elevator equipment, the electric light and power installation, and the refrigerating machinery, the water supply and the incidental fire protection of such buildings are usually passed over with only a few words; and yet of all their complicated and elaborate engineering equipment, the water supply plant is second to none in importance. Not only is the supply of wholesome water for drinking a very essential sanitary requirement, but the running of the boilers, of the hydraulic elevators, of the refrigerating and ice-making machinery depend upon a proper and abundant water supply.

Whatever the character of the water supply may be, three matters of paramount importance interest us, namely, the quality, the quantity and the pressure. The water must be pure and wholesome, it must be available in ample volume, and it must flow on all floors of the building under a good, though not excessive, pressure. In a well-designed water supply plant all three conditions must be fulfilled. Where only one or two are provided for, while the others are lacking, the system must be considered as imperfect.

If the pressure of water be insufficient, it will fail to supply more than the lowest floors directly, and the bulk of the water used in the building must be pumped. If the street mains be too small, the quantity available per minute will be insufficient, and provision must be made in the building for the storing up of a large volume in storage tanks (both in surge tanks and in house or pressure tanks) in order to maintain a sufficient supply during the hours of maximum consumption when the supply available from the city connection will be smallest.

A modern large building, be the same an office or other commercial building, a department store, a hotel, or a hospital, requires the planning and construction of a water supply system equal to, or even more intricate than, that for a town of good size, for the buildings named may be aptly considered as small communities whose many

needs and requirements for comfort and convenience must be carefully studied and provided for by the engineer, if the building is to be considered suitable for the purpose for which it is erected, and if it is not to prove commercially a failure, where it contains offices let to tenants.

Water is required for many and varied purposes, such as for drinking and for cooking, at sinks and drinking fountains; for ablutions in lavatories, bath tubs, shower and spray baths; for washing purposes, in the laundry; for the boiler supply; for the running of the hydraulic elevators; for the ammonia condensers of the refrigerating plant, also for the ice-making apparatus; for the flushing of the waterclosets, urinals and slopsinks; for the washing of windows and of floors; for the sprinkling of sidewalks; for ornamental fountains; and last, but not least, for fire extinguishing purposes. A fair and generous average allowance for domestic consumption per capita per diem would be sixty United States gallons of water. If the total number of persons occupying the building can be ascertained beforehand with any degree of accuracy, the supply required by them can be estimated, but to this quantity should then be added the supply for the boilers, which is very large where steam is generated not merely for heating, but also for power purposes, the supply required for high pressure boilers being about four gallons (30 lbs.) per horse power per hour. A further increased allowance must be made if the building is to contain a refrigerating plant, for if kept constantly running, as is usual where refrigerators and ice boxes are kept cool by brine circulation, the amount of water consumed is sometimes very large, being from $1\frac{1}{2}$ to 2 gallons of water per minute per ton of refrigeration, according to the temperature of the water.

Water used with the ammonia condensers of a refrigerating plant should never be allowed to run to waste into the sewer, yet this waste occurs in some buildings. Such water, being clean, can generally be utilized, either in the feed water heaters for the steam boilers, or it can be pumped into the hot water tanks. It should not, however, as has been suggested, be used for the flushing of plumbing fixtures; for it is warm water at from 80 to 90 degrees Fahr., and experience has shown

that the use of it for flushing waterclosets, urinals, and slop-sinks, is objectionable. Either cold or very hot water should be used for this purpose.

Regarding waste of water by faucets carelessly left running, few water takers stop to think that "sufficient water will flow in 24 hours through an orifice no greater than a lead pencil, under an average pressure, to furnish an ample domestic supply for 360 persons, and that more water will leak through an orifice the size of an ordinary pin than would be used by a fairly economical family of five persons."

In the face of such indisputable facts regarding water waste, would a conscientious engineer be justified in making allowance for an extravagant waste of water in the figures which he uses as a basis for calculation of the principal dimensions of a proposed plant for a building? Waste of water is both wanton and costly; it must be reduced or kept down, and the best way to accomplish this is to charge for the water by meter rates. No engineer should use figures indicating a very wasteful use of water in designing or laying out a water plant.

In a recent engineering discussion, the following rough estimates of allowance for water in office buildings was given:

2-10 gallon per square foot of office space for ablutions (sinks, lavatories).

4-10 gallon per square foot of office space for flushing waterclosets and urinals.

2-10 gallon per square foot of office space for refrigerating plant.

But it would seem better to base calculations on the number of plumbing fixtures, or upon the number of occupants, or both, rather than to average them by the floor space.

The data and facts mentioned should guide an engineer in the determination of the sizes and number of water taps or street connections. It is also necessary to take into consideration the size of the street main, and whether that main is a low or a high-pressure main. Lastly, the length of the service pipe or house connection plays an important part in the volume of supply, for the longer the service or branch, the greater will be the friction of the water flowing in the pipe, and the less volume of water will be received through a pipe of given size, under the same pressure. A

2-inch lead or iron service pipe, 35 feet long, will, under 30 lbs. pressure, discharge 250 gallons of water per minute; but if the length of service pipe is 100 feet, the other conditions remaining the same, it will supply only 160 gallons.

For the drinking water supply, which is comparatively small in volume, the best practice calls for special filters, such as filters in candle form made of infusorial earth, or else of natural filter stone usually in connection with a plant for cooling the water. While it seems at first glance desirable that the municipality should provide filtration works rather than to leave it to the individual water consumers to filter their supply, unusual precautions must be observed where the entire supply for a city is filtered, to keep the water pure after filtration. The water must be stored in covered reservoirs, which involve quite an expense in construction, for in open storage reservoirs the filtered supply would nearly always become exposed to contamination, and where the water mains in the streets are old and full of deposits of mud, clay and iron rust, the filtered supply soon becomes turbid and dirty, and as delivered into buildings it would in most cases necessarily have to be re-filtered before being suitable for use. Hence in some instances it is advisable to provide two supplies—one for potable water, and the other for such uses of water where filtration would seem unnecessary.

Instances may occur when it will be more economical not to filter the entire supply for a city, but to leave the purification of part of it to the individual owners of buildings. There seems to be no reason why this should not even be regulated by law. If health regulations can compel a landlord to abolish cess-pools and wells, to provide soil and vent pipes and traps, to instal water-closets with cistern flush, what is to prevent their going a step further and requiring drinking water to be filtered?

TRADE CONDITIONS IN BIRMINGHAM.

From our own correspondent.

Birmingham, Nov. 10, '04.

RECENT Board of Trade returns show that despite the general slump in trade throughout the country, in the matter of exports as well as of imports the United Kingdom maintains its position as compared with similar returns for a corresponding period last year. So far as exports are concerned, however, the average is largely due to a very considerable increase in the demand for woollens from Lancashire and the north, including very extensive orders for blankets for the use of the Japanese armies in Manchuria. There is a material decline in the export

returns for hardware of the character most closely identified with the Midlands.

* * *

Some of our largest engineering works, and particularly those which lay themselves out for the manufacture of electric plants for Government and for municipal bodies continue very busy. They have not, in fact, been affected by the general depression, for Government orders must be carried out irrespective of the state of trade, and municipal expenditure is ever on the increase, a fact which is engaging the serious attention of politicians who begin to scent a national fiscal danger in the unrestrained extravagance of the majority of our municipal corporations.

* * *

The reassuring aspect of international relationships and the abundant harvest are favorable to a revival in trade, and generally speaking there is a more hopeful and a firmer tone in the market. This is noticeable in the local iron trade, where prices are stiffening, and where the northern steel makers are ousting the foreigners from the Midlands, but are also proving keen rivals of the Staffordshire and Welsh makers.

* * *

Smithwick, though a corporation of itself, is so intimately connected with Birmingham as to constitute one of its outlying suburbs. Here engineering, nuts and bolts, bedsteads and brass-founding, etc., are carried on upon an extensive scale. And it is notable that at a recent meeting held to consider the trade of that district, the urgency of making provision for the large number of the unemployed during the coming Winter, was enforced by the quotation of statistics which showed a serious state of affairs. The bedstead trade has felt the stress and strain of recent times very acutely, and there are rumors of one of our oldest, and at one time our largest, bedstead firms closing its works in consequence of the difficulty of obtaining orders of sufficient importance to meet the cutting prices, which close home and increasing foreign competition have brought about. We Britishers of the Old Country are slow and conservative in our ways. But on almost every side the conviction is forcing itself upon even the most reluctant to accept any new doctrine, that the days of free trade are numbered, if the home trade is to be retained. It is in this connection we are looking to Mr. Chamberlain, and there are those who have the most ample means of gauging the pros and cons of commercial fluctuation who tell us, that no material improve-

ment in the commercial condition of the Mother Country can be looked for until the fiscal policy of the right honorable member for West Birmingham has been carried into effect, and England and her colonies are united in a commercial bond of union having for its first object interchange of British commerce between British subjects.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

"Forgings and Castings."

A BOOKLET issued by the Newhall Chain, Forge and Iron Co., Murray street, New York, has the above title and describes the high-class goods manufactured by this company. Their chain is of superior quality and is very largely used by the United States Government. The advantages of the long lapped weld are set forth. Besides chain, their hooks, shackles, eye bolts, rafting dogs, boat davits, scow castings, etc., are described. There is also some valuable data on the weights per lineal foot of round, square and flat iron.

Canadian General Electric Co.

The Canadian General Electric Co., Toronto, are sending out section 1 of their supply catalogue, which illustrates and describes their annunciators, bells, and house supplies. This catalogue is a large one, 10½x8, and is gotten up with the usual neatness and handsomeness displayed in the catalogues issued by this firm.

The contents of the catalogue might be briefly reviewed as follows: The first 14 pages are devoted to return call systems and annunciators, with price list; the next 3 pages are devoted to electric bells and gongs; the next 12 are devoted to a very complete line of push buttons; the next page is devoted to binding posts; batteries are de-

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited.
HAMILTON, ONT.

scribed and price listed on the next 6 pages; battery supplies are listed on the next two pages; the next page is devoted to medical batteries; and the remaining part of the catalogue is devoted to Edison primary batteries, spark-coils, ammeters and volt meters.

The Handy Trap.

E. M. Nichols, 639 Arch street, Philadelphia, Pa., manufacturer of the Handy Trap, is sending out a little booklet entitled "The Steam Trap; its Value and Use." This booklet touches on the chief essentials of a steam trap, and points out how the Handy Trap fulfils each requirement. The claims for this trap are set forth in straightforward language, and should interest all having trouble with steam traps.

The automatic valve of this trap is the ordinary cone type attached to a bell crank, operated by a heavy ball float, so arranged that both the valve and the seat may be removed from the trap without disturbing any other part of the trap, bolt, gasket or pipe connection; and it can be done without throwing the trap out of service for more than five minutes.

The Mercury Vapor Lamp.

A neat little booklet is being sent out by the Cooper-Hewitt Electric Co., 220 West 29th street, New York, describing the different uses to which the Cooper-Hewitt Mercury Vapor Lamp can be put with great advantage. It is claimed that this lamp gives the best artificial light for all kinds of desk and bench work where the differentiation of the color values is not essential, the claim being that it effects a great saving in the current consumed. This lamp seems to be making a large field for itself.

American-Ball Engines.

The American Engine Co., Bound Brook, N. J., are sending out a very handsome, well illustrated catalogue descriptive of the American-Ball Engines, both simple and compound. A very interesting and instructive description of the general construction of the engine is given, and then each distinctive part is described and illustrated in detail. This catalogue would prove a valuable catalogue of reference to all directly interested in steam and steam engines.

Pearl Square Auger.

The Pearl Square Auger Mfg. Co., 107 Liberty street, New York, are sending out a little leaflet describing and illustrating some points of merit of the Pearl square auger. This auger was awarded a gold medal at the 19th Technical Exhibition of the Massachu-

setts Charitable Mechanic Association. During the exhibition the auger was worked in knotty maple, oak and spruce, also ash, chestnut, hard pine and whitewood.

This auger makes a square hole, mortice or gain with a rotary motion, and is claimed to be the only tool with which you can make a mortice at any desired angle, on the timber or endwise of the grain. On the leaflet is pictured a sample of work done with this auger.

Those interested in augers should not fail to get a copy of this leaflet.

Chapman Valves.

The Chapman Valve Mfg. Co., Indian Orchard, Mass., are sending out an announcement contained in a little booklet of attractive design, presenting a partial list of the users of their valves. The booklet contains 24 pages, the right hand containing the list of users and the left hand illustrations of the various styles of valves manufactured

by them. This firm builds valves in size from $\frac{1}{4}$ in. to 72 in. in diameter, operated by hand, air, electric or hydraulic power.

"3 in 1 Oil Book."

Special attention on the part of readers of *HARDWARE AND METAL* is called to the issue of the "3 in 1 Oil Book" by the G. W. Cole Co., 141-145 Broadway, New York, not only on account of the large issue, 1,500,000 of this book, but also on account of the information contained therein. This oil cleans and polishes, prevents rust and lubricates, and the myriad uses to which it is applied are described in the booklet. The above firm will be pleased to send a copy of this instructive booklet to anyone on application.

Power Transmission Appliances.

This is the title of an hundred and eighty-four page catalogue just issued



Winter, Spring, Summer and Fall!

All seasons of the year are good seasons for the sale of

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There's a good demand for it all the time, because there's good use for it all the time, in decorating the little things about the house—shelves, tables, cupboards, flower boxes, etc.

It is easy to apply. Looks and wears well. Dries with a good gloss and stands plenty of scrubbing.

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1318

by the Fairbanks Co., a copy of which should be in the hands of every one interested in power transmission appliances. It contains valuable information on belting and rules for determining the power. Also information on shafting, keyweigh dimensions, standard keys, shaft couplings, self-oiling hangers, pillow blocks, wall frames, and pulleys. Regarding pulleys a full list with prices is given, not only for solid but for split pulleys for all widths, this being the first catalogue issued to contain such information. One of these valuable books will be sent to anyone on application to Fairbanks Co.

HINTS TO CANADIAN EXPORTERS.

THE Department of Agriculture, Ottawa, is in receipt of a letter from a merchant residing in Colombia, South America, to the effect that the people there are incensed against the United States and disinclined to trade with that country. Among other things Colombia purchases flour, kerosene, sewing machines, canned goods, soda biscuits and furniture from the United States. At present there is an excellent opportunity to get this trade if Canadian exporters so desire. Shipments could be made from Halifax or Montreal to Jamaica whence there is a weekly service to Colombian ports.

• • •

The Canadian commercial agent at Antigua, Montserrat and Dominica, B.W.I., in his latest report draws attention to the fact that Canadian manufacturers are in the habit of drawing through the bank against shipments. Most importers in the West Indies object to this procedure, although they are quite willing to remit on receipt of goods. It is suggested that manufacturers should first satisfy themselves of the standing of their consignees and make free shipments.

• • •

A leading Japanese importing firm has complained that Canadian exporters of salmon require inspection and weighing on the Canadian side as a condition. The result is little or no business. On the other hand United States houses agree to accept Yokohama customs weights. Another kick is registered because when first catch salmon are contracted for it occasionally happens that some of the second comes mixed up with it.

• • •

C. E. Sontum, Canadian commercial agent in Norway, in his latest market

report states that Norway has entered into a parcel post convention with the United States and suggests that Canada follow suit. Canadian apples of first rate quality are in constant demand in Norway, notwithstanding the high rate of duty and a market can be built up so long as first class stock only is sent over. Baldwins and choice evaporated fruit are principally required. In view of the short crop of hay there are excellent prospects for Canadian hay in Norwegian markets. Mixed clover and timothy not too coarse is the kind wanted.

• • •

A British West India importer writes that he recently received three shipments from as many Canadian houses and that the invoices arrived a week later than the goods. Such delay causes no little inconvenience when bills of lading do not arrive with goods, consignees having to satisfy the steamers' agents as to the ownership of the goods before delivery can be secured. In the absence of invoices the customs authorities have to be satisfied, and often heavy

deposits have to be made pending the arrival of documents. When goods are supplied against draft to the bank, and drafts do not arrive, the goods are held in the steamers' warehouse subject to a heavy rent, this being done to prevent these warehouses from being used for general purposes. Several instances are mentioned where orders have gone to New York instead of Canada simply because consignees seldom have any trouble such as often occurs with shipments from Canada.

• • •

It has frequently been the experience of importers in the West Indies to have Canadian shippers disappoint them entirely after they have contracted to make delivery of a certain quantity of a certain article at a certain time. West Indian merchants are anxious to encourage trade with Canada and feel that the Canadian trade should do what it can towards the removal of the necessity of sacrifice on the part of customers in the West Indies.

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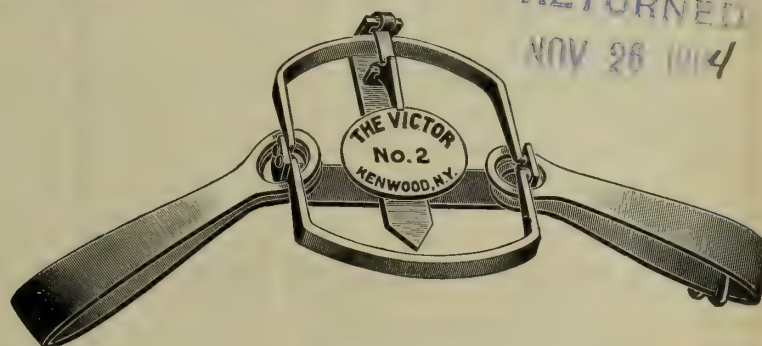
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Ent Booth 27
Page 15



New Victor, without chain,	0	1	1½
" with "	0	1	1½

without chain,	0	1	18
with	0	1	14



New Victor, without chain,	2	3
" with "	2	3

without chain,	2	3
with "	2	3

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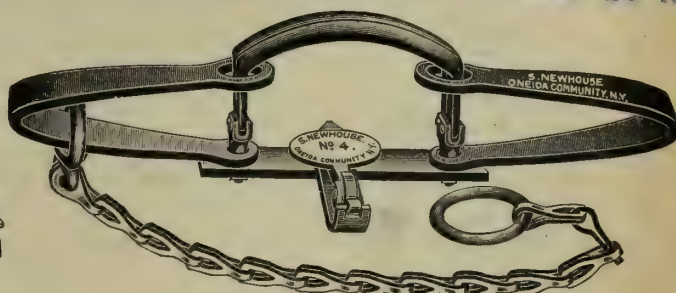
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The Hawley & Norton Traps



Hawley & Norton, without chain,	0	1	1½
" " with "	0	1	1½

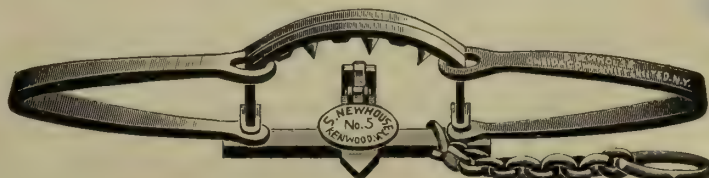
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Hawley & Norton, without chain,	2	3	4
" " with "	2	2	4

1. without chain,	2	3	4
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Bear Traps



FOR OTHER TRAPS SEE OUR HARDWARE CATALOGUE.

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for a host of household ills—the best cure, the only cure for many of them.

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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Nov. 25, 1904.

It was stated in this column last week that the manufacturers and dealers would in all possibility see a falling off in the demand for heating and plumbing goods in the near future. So far this has not materialized but a strong and steady demand still prevails and the week's sales have been good. The

eastern boats have stopped running which means an advance in freight rates for these points. The Richelieu boats will stop running this week, making this the last that any boat shipments can be made from Montreal. Prices are maintained but a near advance in nearly all lines is expected.

Range Boilers—Considerable activity still prevails in range boilers, the season for which generally lasts until well on in December. We quote: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—An advance is noted in lead pipe this week, as was expected, owing to the very high price now prevailing for pig lead. The discount which was formerly 35 per cent. is now only 30 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—The remarkably mild and open weather has enabled a good deal of work to be done lately, calling for this class of goods and consequently the demand has been much larger than was anticipated. We quote: Soil pipe, standard, 50 per cent and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—The demand continues fairly good with no change whatever in prices. Discounts quoted on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—The iron pipe market is firmer than it has been for some time back. There is no noticeable cutting of price and considerable activity prevails. Our quotations are: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount

on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Nov. 25, 1904.

WINTER is fast approaching, and yet the demand for plumbing and heating goods has not shown signs of diminution. According to the reports and opinions of the dealers, this is a record year for the amount of business transacted, in fact the amount of sales has never been equalled in previous years.

Merchants are on the alert, on account of the excitable metal market, and indications point to an advance, although opinion differs as to the exact time.

Opinions in regard to the outlook are varied; some are expecting a good demand all Winter, for stock that can be used on inside work, while others expect the demand to be quiet after the snow falls.

Lead Pipe—Trade is brisk. Demand has increased, and the amount of discount has decreased 5 per cent. We quote: Lead, 7c; lead waste pipe, 8c; discount 30 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—Demand is strong and prices are firm. An increase of 5 per cent. is current on headers and nipples. Indications point to an advance. Our quotations nominally are: Malleable fittings 20 per cent. for American.

and 35 per cent. for Canadian; cast iron (standard), 65 per cent.; headers, 60 per cent.; flanged unions, 60 per cent.; malleable bushings, 57 1-2 per cent.; cast iron bushings, 70 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A steady demand continues with the discount unchanged at 15 per cent.

Iron Pipe—Prices continue unchanged. Market is unsteady. Demand holds strong. Our quotations are: Black, 1-4 inch, \$2.04; 3-8 inch, \$2.14; 1-2 in., \$2.30; 3-4 in., \$2.88; 1 in., \$4.12; 1 1-4 in., \$5.68; 1 1-2 in., \$6.75; 2 in., \$9.00. Galvanized 1-4 in., \$2.80; 3-8 in., \$2.98; 1-2 in., \$3.14; 3-4 in., \$4.02; 1 in., \$5.80; 1 1-4 in., \$7.88; 1 1-2 in., \$9.45; 2 in., \$12.60.

Solder—Prices continue unchanged. Market is unsteady owing to fluctuating tin and lead market. Bar solder is quoted at 17 1-2c and wire at 18c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 5 1-2 feet, 2 1-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 2 1-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D, A quality, \$5.40; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

Descending a stair at the rear of the store the visitor enters the workroom used in connection with the plumbing, tinsmithing and gas fitting work, and is here shown the different workings of each machine employed in this business. Mr. Wallace takes great pride in the stove pipe he manufactures, of which he says he can make one every minute, and claims he has sales in every section of the city.

In this workroom Mr. Wallace has stocked iron and lead pipe, and glass in plentiful quantities ready for immediate use.

Leaving the workroom in the basement the visitor is shown the warehouse, a two storey building 15x20 feet, erected at the rear. This warehouse is used merely as a stock room, and every line of goods in connection with the hardware business is stocked here ready for immediate sale.

Mr. Wallace has been in business for thirteen years, and during that period has been successful in building up a substantial trade. His success goes to prove that it is not always in the big stores that a comfortable income is earned, but that small stores and reliable methods have their advantages as well.

A PLUMBER WHO BRANCHES OUT.

AT No. 437 Parliament street, Toronto, is located the store of Mr. George W. Wallace, who combines in his business that of hardware merchant, tinsmith and plumber. Mr. Wallace's store is a small one, being only eighteen by twenty-four feet in size, but yet in his narrow premises he carries on a remarkably successful trade. It should be of interest to many dealers to learn how Mr. Wallace stores his stock and transacts business, as the conditions under which he labors are identical with those of many of them. To this end a representative of Hardware and Metal inspected Mr. Wallace's premises and enjoyed a pleasant little chat with him about his business.

Entering the store the visitor sees the wall on his left lined with shelves from floor to ceiling, and extending from the front to the back of the store. With the exception of two rows of shelves at the top and a vertical showcase three feet by five, this space is taken up by Bennett's patent shelf boxes. In these everything in the line of shelf hardware is displayed. On the two top shelves referred to is displayed a complete and an artistically colored set of lamp chimneys and gas globes.

In the centre of the shelving on this wall is a vertical showcase with a dark green background, displaying to good advantage hammers, boring bits, saws, and measures.

At the front on the other side of the store Mr. Wallace has by means of wall paper, oilcloth, bath tub and wash basin, produced a model little bathroom, each article appearing as if in practical use. Above the bath and displayed in an oblong frame with a light green background, is an excellent line of gas fixtures and gasoliers, which go a long way in giving the premises an

attractive aspect. Extending from the plumbing display to the rear of the store is another line of shelves also reaching from floor to ceiling. On these shelves are displayed to good effect a



MR. GEORGE W. WALLACE.

complete line of Sherwin-Williams paints, tinware of all descriptions, and a line of nicely colored steel granite-ware.

At the front of the store and directly inside of the door is a revolving stand of five shelves, on which is displayed a complete line of varnishes, oils, floor fillings, turpentine and floor wax. Behind this stand is a showcase some eight feet in length resting on a counter on which is displayed to good advantage cutlery, razors, pocket knives, and numerous other articles in connection with the fancy trade.

Dr. Ames on Plumbing Laws.*

By H. A. Knox, Ottawa.

I HAVE been much struck with the views held by Dr. Azel Ames, Wakefield, Mass. Dr. Ames does not offer any evidence to show a fair diagnosis of the conditions he complains of. He does not even prescribe for the evil, which he says is so serious, yet which is supported by modern thought. He would, nevertheless, have the plumbers of America turn the present conditions upside down by a crank movement.

The pretended means, suggested by the learned doctor, are farcical. In one paragraph he disparages the capacity of the plumber for introducing wise sanitary laws, and in the next he appeals to them for improvement.

At present there is a potential rivalry between the medical practitioner and the practitioner of sanitation. This rivalry is, moreover, steadily increasing. Longevity would be more marked if purity of mind and body were considered every day as well as Sunday.

The doctor climbs on the highest peak to see and be seen. Why did he not reconnoitre, instead of taking a position so easy to attack—he who would have modernity go back to primordial conditions, he who fails to appreciate that even with plumbers in association there is wisdom to be gained, he who finds it convenient to forget that he is a mem-

* See article on "Plumbing Laws and Ordinances" on page 18 of our last issue.

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Tried what?

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Some of You Have Had Trouble

this season with Stove and Furnace Cements. That
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Sterne's Asbestos Cement

—a perfect article guaranteed with a money-
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Send for circular and learn more about it.

G. F. Sterne & Son, Sole Makers, Brantford, Ont.
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roofing is yours for the asking.

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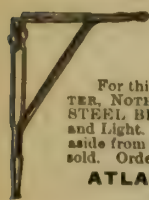
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For this purpose there can be NOTHING BETTER, NOTHING CHEAPER, than the BRADLEY STEEL BRACKET. It is well japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

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By R. R. Williams; 576 pages; 6 $\frac{3}{4}$ x 10 inches; 660 illustrations; bound in cloth\$3.00

Hardware Store Business Methods.

A series of articles dealing with business methods in the hardware store, by different authors; 227 pages; 5 $\frac{1}{2}$ x 8 inches; illustrated; cloth binding.....\$1.00

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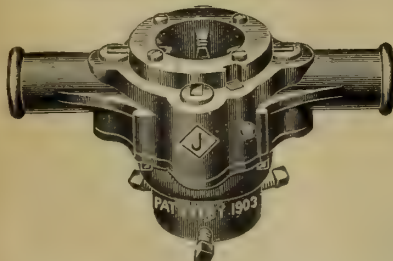
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a Specialty.

THE **CANADIAN SEWER PIPE CO.**

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JARDINE PATENT PIPE DIES

Make Hard Work Easy.



The Herbert Jones Co., Steamfitters, Hamilton, Ont., say: - With this Die one man is quite capable of accomplishing what formerly took two men to perform.

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HESPELER - - - ONTARIO

ber of an association whose members have the same limitations as other men.

I think of the doctor as a man studying men. I am a plumber by trade, and in my business, that of a master plumber, I recognize my duties to the public and play the game of life as fairly as I can. My trade calls for all the skill and ingenuity that experience has taught, and its management all the ability that education has developed. I recognize the utility of other classes and I claim that concentrated thought in each avenue has increased the sum of human happiness.

This criticism will have served its purpose if it only teaches your contributor, the doctor, that good plumbing has, like good physic, its place in relation to progress.

One or Two-Pipe Steam System.

"**B**OSTONESE" in the Metal Worker gives the following thoughts on the one-pipe and two-pipe steam system. He looks at the question in a very common sense way, and his ideas should prove of interest and value to steam fitters and plumbers:

Less care and judgment are necessary to install a quiet working two-pipe system than when the one-pipe method is adopted, especially if the returns of the former are water sealed in the basement. The two-pipe system is preferable when the risers must be located at some distance from the radiators and the branch pipes can have but little pitch. One-pipe connections must have a good pitch to cause the water of condensation to flow back to the riser against the current of steam passing to the radiator. The risers in a two-pipe system are considerably smaller than with the one-pipe system; but on the other hand there are twice as many of them, involving extra labor in erection, and, in the aggregate, taking up fully as much space. The chief advantage in the one-pipe system is, perhaps, the avoidance of one valve on each radiator. With the two-pipe system, unless both valves on a radiator are properly operated, noise will occur. This is true of single pipe connections when the valve is only partially raised, but it is less likely to occur than when two valves must be operated. Single pipe work appears to have been more generally used in the west than in the east.

It is difficult to state positively, in answer to the above inquiry, which system is used in most cases at the present day. There is no trouble whatever with the one-pipe system with overhead feed

in high office buildings, provided the branch connections are short and the risers are not reduced too rapidly in size from floor to floor. In buildings where the branches may be run below ceiling, instead of above the floors, long branches may be installed without trouble on a one-pipe system, since a good pitch may be secured; but this is not possible with branches above the floor connections with radiators having openings at the usual height. In high buildings divided into large rooms with comparatively few radiators, and those of large size, the two-pipe system would, in many cases, be preferable in order to avoid using risers of excessive size.

A consideration of the operation of the two systems as to their relative economy brings out a point in favor of the two-pipe method in that the condensation from the radiators never mingles with the steam passing through the risers that supply them. With the one-pipe system the water from the radiators descending the risers through which the steam is ascending mixes with it and condenses a portion of it. For residence work there appears to be no good reason for installing anything but a one-pipe system for direct radiation.

Sanitary Conditions Imperative.

THE close relationship existing between unsanitary conditions of houses and disease is strongly shown by the list of defects found by the health officer of Montreal in the plumbing condition of houses where contagious diseases prevailed. It was found that where there were defective wooden, tile or iron drains, thirty-seven diseases existed. Drains frozen or with holes, 5; drains leaking in cellar or badly connected with soil pipes, 31; drains open at connection with waste pipe, 25; joints of soil pipe defective, 17; soil pipes not continued through roof, 2; waste pipes defective or without traps 31; waste pipes connected with water closet traps, 7; traps under sink, split, 35; joint disconnected at junction of soil pipe, with water closet, 8; water closets dirty, frozen or defective, 50; trap of water closet open or without ventilation, 33; old system of water closets defective, 7; the flush of water closets not sufficient or leaking, 12; the connection of the vent pipes with water closets, open or disconnected, 6; the lavabo bowls broken, leaking or without syphons, 4; defective baths, 5; houses dirty, damp, bad odors, 17; cellars dirty,

HARDWARE AND METAL

The only Canadian Plumbing Paper published in Canada.
Endorsed by Canadian National Association.

Vol. XVI.

NOVEMBER 26, 1904.

No. 48.



I. Making Money II.

Would you pay \$2.00 for a "tip" on the markets that would save you \$20.00?

Would you pay \$2.00 for a "kink" that would save you dollar after dollar for a life time?

Would you pay \$2.00 for 52 reports on the things most worth knowing about relating to your business?

Well, if you would, sign the enclosed post card, and mail.

Not that we guarantee you a \$20.00 bill in return, or a "kink" worth \$100; but—

We do say that you can, by becoming a subscriber to **HARDWARE AND METAL**, keep yourself thoroughly informed as to markets and the best new things pertaining to your business, and thereby save and make money.

HARDWARE AND METAL is the only publication in Canada which gives the *News* of your business, which will keep you intelligently informed as to what is doing in the plumbing world.

It is published weekly, and once a month it will enlarge its Plumbing Department to adequately serve your demands.

It is worthy of your support—of your subscription. Sign the accompanying card and we shall send **HARDWARE AND METAL** to the end of January 1905.

Tear off coupon below and mail at once.

HARDWARE AND METAL

The Only Plumbers' Paper Published in Canada

MONTREAL.

TORONTO.

WINNIPEG.

Hardware and Metal,

Montreal Toronto Winnipeg

1904

Please send me (us) copy of Hardware and Metal from now till Jan. 1906, for which I (we) agree to pay \$2.00.

Yours very truly,

Name,

Address,

damp, stagnant water, 17; yards dirty or drains choked, 5; privies full, offensive, connected with the sewer, 4; privies full, offensive, not connected with the sewer, 3; houses vacant, not allowing of examination or test, or presenting no means of reaching the roof, 51.

To Promote City's Health.

ALL those who are at all interested in questions affecting the public health will be pleased to note the action of the City Council of Montreal, when at a special meeting held recently they passed a by-law to prohibit spitting upon sidewalks, the floors of street cars and other public conveyances, meeting places, halls and churches or other public buildings. Anyone knowing the conditions might wonder why such a by-law had not been passed long ago.

There are three sections to the by-law as below, and it is hoped in the interests of the sanitary conditions of the city that it will be vigorously enforced.

The clauses of the by-law are:

Sec. 1. No person shall spit upon the floor of any railway car, street car or other public conveyance, or upon the floor of any theatre, public building, church, opera house, music hall or hall used for public meetings; railway or steamboat stations or waiting rooms or other public hall, building, room or place, or upon any platform surrounding, in front of, or in the immediate vicinity of any such place; or upon any sidewalk or covered way, within the limits of the city of Montreal.

Sec. 2. No person shall empty, clean out or wash on the sidewalk of any street or public place, any cuspidor (spittoon) or receptacle containing saliva or spittle.

Sec. 3. Any person violating or contravening any of the provisions of the present by-law shall, upon conviction thereof, before the Recorder's Court of the city of Montreal, be liable to a fine with or without costs, and in default of immediate payment of said fine or of said fine and costs, as the case may be, to an imprisonment, the amount of said fine and the term of said imprisonment to be fixed by the said Recorder's Court, at its discretion; but such fine shall not exceed forty dollars, and the imprisonment shall not be for a longer period than two calendar months: the said imprisonment, however, to cease at any time before the expiration of the term fixed by the said Recorder's Court upon payment of the said fine, or fine and

costs, as the case may be, and if any infringement of this by-law be repeated, such repetition shall, day by day, constitute, upon summons or arrest, a separate offence.

Building Permits.

TORONTO.

J. Polesky, dwelling, No. 29 Brooklyn avenue, \$1,600.

J. Bannon, verandah, No. 85 Major street, \$200.

T. Brick, addition to dwelling, No. 28 Gifford street, \$200.

G. Galletty, dwelling, Galt avenue, near Gerrard street, \$150.

F. Ingram, dwellings, West avenue, near First avenue, \$9,600.

F. Terry, dwellings, Bathurst street, near Ulster avenue, \$5,000.

A. Addison, dwelling, Madison avenue, near Dupont street, \$5,000.

E. A. Barrett, division wall in cellar, No. 573 Dufferin avenue, \$100.

W. F. Campbell, underpinning dwelling, No. 24 Earl street, \$175.

W. E. Smyth, underpinning dwelling, No. 356 Lippincott street, \$200.

W. E. Smythe, underpinning dwelling, No. 356 Lippincott street, \$200.

J. Townsend, stable removed, rear of No. 21-25 Yorkville avenue, \$250.

Geo. Harrington, addition to dwelling, No. 58 Charles street, \$125.

Mrs. Grafton, dwellings, Tiverton avenue, near First avenue, \$2,950.

Mrs. F. McLean, dwellings, Wellesley street, near Sumach street, \$3,200.

A. M. Witmer, addition to dwelling, in rear of No. 3 Afton avenue, \$200.

MacPherson trustees, dwelling, No. 100 Roxborough avenue east, \$5,500.

Chas. Mould & Co., dwellings, Nos. 380 and 382 Montrose avenue, \$3,500.

Construction & Paving Co., extension to stable, No. 19 Melinda street, \$100.

W. H. Pringle, ice house and refrigerator, Dundas street, near St. Helens avenue, \$100.

MONTREAL.

H. N. Monk, Ash avenue, 4 dwellings, \$5,000.

Henry Gareau, Boyer street, one house, \$1,900.

Geo. Crepeau, Frere, La Salle, two Lewis Bros. & Co., Bleury street, one houses, \$3,000.

warehouse, one factory, \$100,000.

James Strachan, Hotel De Ville, one house, \$2,000.

J. B. Longpre, Beaudry street, four dwellings, \$4,000.

E. Archambault, St. Joachim, two dwellings, \$1,500.

Laframbois & Guimond, Hotel De Ville, two houses containing six dwellings, \$6,000.

Montreal L. H. & P. Co., Harbor street, alterations on one house and one factory, \$2,000.

OTTAWA.

G. W. Hadley, dwellings, Kent street. Jas. Wilson, dwelling, Flora street, \$600.

L. Beree & Co., office, St. James street, \$3,000.

Mrs. Visseau, dwelling, Division street, \$1,300.

A. J. McDiarmid, addition to dwelling, Gladstone avenue, \$300.

HAMILTON.

Gladon & Disher, dwellings, Wilson street, \$3,500.

I. K. Frewing, dwelling, Ashley street, near Wilson street, \$950.

A. Andrews, dwelling, Sandford avenue, near Cannon street, \$1,500.

B. Griffin, dwelling and store, corner of Hannah and Queen streets, \$2,800.

LONDON.

Chas. Dengate, dwellings, Anderson avenue.

McAdam & Willis, stable, Richmond street, near Pall Mall.

Building Notes.

Work has begun on the new postoffice at Winnipeg.

A new church is to be built by the Baptist people in Sackville, Ont.

The new factory of James S. Elliott & Son., Prescott, is drawing near completion.

Penfold Bros., Guelph, Ont., are building a three storey addition to their factories.

Medicine Hat is to have a new Y. M. C. A. building, costing between \$12,000 and \$15,000.

Invitation for tenders for erecting a railroad station at Alton, N. S., are open till Nov. 28.

Work has been begun on the new buildings to be erected by the Canada Car Co., Montreal.

The Truro Knitting Mills Co., Moncton, N. B., are building a large addition to one of their plants.

The contract for the erection of the National Victoria Museum, Ottawa, is expected to be awarded this week.

Revillion Freres have bought property in Prince Albert with the intention of building a large departmental store.

F. J. Mesher has received the contract for the erection of a new hotel in Victoria, B. C., which will cost \$31,000.

Snider Bros., Portage La Prairie, have received the contract for the erection of the Agricultural College at Winnipeg.

The contracts have been let for the erection of the Southwestern Traction Co.'s new power house and barns at

London. The power house is to be of cement and steel, and work on these buildings has already begun.

Nash, Naylor & Carson, of Winnipeg, are to build a large department store, which will be 75x135 feet, and three storeys high.

Mr. Joseph Battle, contractor, has commenced operations at the new iron bridge which he is to build for the Grand Trunk Railway near the new canal at Welland.

INQUIRIES FOR CANADIAN TRADE.

The names and addresses of the firms making the following inquiries may be had by application to the Department of Trade and Commerce, Ottawa. Parties making inquiries will be careful to mention the office under which said inquiry appears and the number.

THE following inquiries concerning Canadian trade have been received from the Commercial Agent, Melbourne, Australia:

5. A leading Melbourne agency would like the agency of a Canadian line of enamelled and porcelain lined baths and fittings and sanitary accessories. There is a large demand for baths in this country, and this opportunity offers exceptional advantages to Canadian manufacturers requiring efficient representation in Australia and New Zealand.

6. A Melbourne firm asked particulars of "up-to-date" acetylene gas generators. There is no use sending catalogues of obsolete goods, but there is an increasing demand for effective generators, which can be shipped f. o. b. New York at a fair price.

The following inquiry has been received from the Curator, Canadian section, Imperial Institute, London, Eng.:

107. An Irish firm of timber brokers reports a good outlet for Canadian hardwoods, and would be pleased to hear from Canadian shippers.

The following inquiries concerning Canadian trade have been received from the Commercial Agent, Yokohama, Japan:

12. A mercantile firm in Yokohama wishes to be put in correspondence with manufacturers of cabinet hardware, such as doors and door locks, padlocks, drawer pulls and handles, coal scuttles, brass furniture trimmings, etc. These goods must compete in prices with imports from Germany and England. Samples are required with prices f. o. b. Vancouver and New York; also c. i. f. Yokohama. Samples to be sent free of charge. If prices will admit of competition orders will follow. Good prospects for an increase in this line.

Note.—In quoting for the Japan market in any or every line of trade, make prices to cover all charges up to the customs house at Japan ports, or otherwise f. o. b. Vancouver, Victoria or At-

Business Changes

ONTARIO.

ROBERT HARKNESS, manufacturer of moccasins and tanner, Renfrew, is dead.

John R. Parker, lumber merchant, Amherstburg, is dead.

Jos. Bertrand, blacksmith, Rockland, has assigned to W. A. Cole.

The Central Canada Coal Co., Brockville, have suffered loss by fire.

J. E. Ratz's saw and grist mills, Gads Hill, are advertised for sale.

The assets of Jarvo & Co., hardware merchants, Cornwall, have been sold.

O. J. Swayzie, tinware dealer, Kintore, has assigned to D. G. Cuthbertson.

Joseph Bertrand, blacksmith, Rockland, calls for a meeting of creditors Nov. 26.

J. & J. W. McNutt, implement and harness merchants, Blenheim, have assigned to J. Rutherford.

QUEBEC.

Octave Papillon, plumber, Quebec, has made a voluntary assignment.

Plante & Phaneuf, contractors, Montreal, have dissolved partnership.

The assets of the Parker Coal, Ice and Cartage Co. are to be sold Nov. 30.

Leclaire & Grimard, contractors, Montreal, have dissolved partnership.

The assets of Brunet & Desjardins, brick manufacturers, Montreal, are to be sold.

J. M. Marcotte has been appointed curator to Edmond Germain, contractor, Montreal.

Mrs. Louis Klineberg has registered with Louis Klineberg & Co., coal merchants, Montreal.

Alphonse Viau has registered under the style of Alphonse Viau, wood and coal dealer, Montreal.

Geo. Lapointe & Co., contractors, Montreal, have assigned; meeting of creditors held on Nov. 25.

Mrs. Damase Brissette, Longueuil, has registered under the style of Dame Brissette, wood and coal merchant.

Chs. G. Brouillette and Jos. D. Champigny have registered with the Frontier Electric Enterprise Co., Masonville.

The Maisonneuve Engine Works, Montreal (Masionneuve), have assigned; meeting of creditors to be held on Nov. 29.

Mrs. Emery Archambault has registered under the style of E. Archambault & Cie., hardware merchants, Montreal.

Alderic Garand and Louis Garand have registered under the style of Garand & Freres, carriage manufacturers, St. Polycarpe.

MANITOBA AND N.W.T.

L. Spittall, machinist, Brandon, has been burnt out.

M. Lamontague, brick manufacturer, St. Boniface, is dead.

The Rat Portage Lumber Co., Brandon, have suffered loss by fire.

S. Marshall, agricultural implement dealer, Elgin, has been burnt out.

Thos. Hamilton, lumber dealer, Crandell, has been succeeded by Hamilton Bros.

Wood & Sutherland, dealers in agricultural implements, have dissolved partnership.

The sale of the hardware business of H. W. S. Luckhardt, Bowden, to G. Whirlock, has been cancelled.

BRITISH COLUMBIA.

Hazelmere Mill Co., Hazelmere, have suffered loss by fire.

A. G. McKay, Poplar, has moved his saw mill business to Fernie.

The sheriff is in possession of the A. D. McRae Lumber Co., Hosmer.

The plant of the Cascade Lumber Co. has been purchased by W. L. Tait.

A LITTLE ABOUT TUBE SKATES.

Tube skates are having an increasing vogue and this year they give promise of being in considerable demand. The thin blade, which is their special feature, gives speed and easy running qualities and makes the skate not only light in use but a thing of beauty as well. The thin blade is supported by a strong steel triangular tube, which reinforces and strengthens the blade and absolutely prevents breakage. The hollow cups connecting tube and foot and heel plates are of the finest quality of cold rolled steel in cone shape. They are dovetailed on to the tubes and attached to the foot and heel plates by a seam which makes it quite impossible for them to break or pull apart at these connections. These skates, as described, are made by the A. D. Fisher Co., Limited, Toronto.

A CALLER FROM NEW YORK.

Mr. A. E. Welti, representing Keuffel & Esser Co., of New York, was a caller at the Montreal Office of Hardware and Metal this week. This firm are large manufacturers of drawing materials, surveying instruments and measuring tapes and are fully alive to the possibilities of Canadian trade.

Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Philip D. Johnston; 65 full-page plates and 2 folding plates, with full text and 184 illustrations; cloth.....\$2.00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire buildings for bells, alarms, annunciators, and gas lighting from batteries. 55 pages, illustrated; paper, 25c.; cloth.....50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed.....\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages.....25c.

Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for mixing and using cements. 96 pages....\$1.00

Metallurgy of Cast Iron.

By Thos. D. West. Showing processes involved in its treatment, chemically and physically, from the blast furnace, through the foundry, to the testing machine. 627 pages, 153 illustrations....\$3.00

Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and zinc; also tinning gray iron castings....\$2.00

Practical Plating and Polishing.

Best and Most Approved Methods of Preparing and Cleaning all Metals for Electro-Plating and Polishing. 114 pages, illustrated.....80c.

New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as applied to all branches of sheet metal work, 430 pages, 744 illustrations.....\$5.00

Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams, tables, 123 pages, 53 figures.....\$1.00

Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates.....\$1.50

Furnace Heating.

By Wm. G. Snow. Comprehensive treatise on warming buildings with hot air, with appendix on furnace fittings, 170 pages, 90 illustrations, cloth.....\$1.50

Plumbing Problems.

House drainage and plumbing, 309 pages, 146 illustrations.....\$2.00

Practical Hints on Joint Wiping.

For beginners in plumbing, 66 pages.....25c.

Kitchen Boiler Connections.

A selection of practical letters and articles relating to water backs and range boilers. Fifth edition, enlarged.....\$1.00

Steam and Hot Water Fitters' Text Book.

A book prepared for the Steam and Hot Water Heating Course at the New York Trade School, with supplementary chapters on house heating, specifications and surface estimating, by Thos. E. McNeill. 140 pages; 5 x 7 in.; numerous illustrations; cloth binding.....\$1.00

Easy Lessons in Roof Measurements.

Twelve short lessons on figuring from architects' or scale drawings the amount of material required to cover a given surface in flat, hipped or irregular shaped roofs, by W. Neubecker. 31 pages; 5½ x 8 in.; 12 illustrations; paper cover.....25c.

Enquiries for above books should be sent to

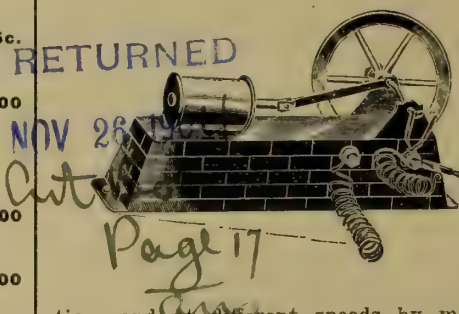
BOOK DEPARTMENT

HARDWARE AND METAL,
Toronto

ELECTRICAL

Electrical Novelties.

THIS is the time of the year that the hardware dealer should be preparing his stock in anticipation of a lively Christmas trade. A supply of electrical novelties offers one of the best fields that can be exploited. There is shown herewith an electrical toy known as the Sayer electric engine that is being placed on the market for the first time. This engine is built on scientific lines and modeled after a modern horizontal Corliss steam engine. The engine can be run in either direc-



tion, and at different speeds by means of the controlling lever. It involves no great outlay to handle, as it retails for one dollar. It consumes but one-half ampere of current—about the same as a miniature battery lamp. Two dry cells do the work. Another attractive novelty placed on the market by the Sayer Electric Co. is the Sayer electric lighting plant, which is a complete lighting station in miniature, consisting of a horizontal Corliss engine of the latest design belted to a modern type dynamo wired to a complete arc light. A catalogue of these and other novelties may be had on application to Sayer Electric Co., Montreal.

Renewing Burnt-Out Lamps.

There is now on the market a machine for renewing burnt out lamps, which makes it practicable for large users of lamps to do their own refilling. This effects considerable saving, as four girls under the supervision of the station electrician can renew five hundred lamps a day. Less than a mechanical horse power is required and about one-half k. w. of electrical energy. The method of doing this has been so perfected that all but about three per cent. of the lamps can be brought within the range or candle power usually shipped on an order for one voltage and one candle power. Carbons are now being supplied already to mount in the bulbs. By the utilization of a paste cement, which is now universally used for attaching the filaments to the wires, the process reduces itself to pasting the filament in position and exhausting the bulb.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1.000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

BUSINESS CHANCES.

BLACKSMITH SHOP and tools well equipped; doing first-class business. Box 89, Durham. f

FOR SALE—Heading factory and saw mill combined, at Tweed, Ont.; good supply of timber to be had at reasonable prices; good shipping facilities; satisfactory reasons for selling. Apply to Steinhoff & Gordon, Wallaceburg, Ont. f

FOR SALE—Good paying tinshop; good dairy trade; large cavetrough business; everything complete for the work; stock, tools, horse, rigs, cheap. R. B. Scriven, Otterville, Ont. (48)

HARDWARE BUSINESS FOR SALE—In a thriving town in Western Ontario. Satisfactory reasons for selling. Stock new and well bought amounting to say \$3,500, business well established with but one competitor. Apply, Box 197, HARDWARE AND METAL, Toronto. (50)

SITUATIONS WANTED.

TRAVELER in hardware, paints or stoves; long experience; good connection in Ontario; sober and reliable; open January 1st. Box 198, HARDWARE AND METAL, Toronto. (49)

TO IRON AND STEEL MANUFACTURERS.

FIRM of iron and general merchants well placed for advantageous buying, is prepared to act for colonial houses as buying and shipping agents on commission, of iron and steel and manufactured goods. Address in first instance Box 2325, Sell's Advertising Offices, Fleet street, London, Eng. (48)

MECHANICS WANTED.

COOPERS WANTED—Tight work. Myers Company. Saulter street, Toronto. f

CABINETMAKERS WANTED—Two first-class bench hands; also wood turner. Apply to the Burton & Baldwin Mfg. Co., Limited, Hamilton, Ont. f

CARRIAGE blacksmith and gear mounters wanted. Apply, stating experience and wages wanted, John Campbell & Son, London, Ont. f

GENERAL BLACKSMITH WANTED—State wages and experience; single man preferred. W. J. McNally, Alvinston, Ont. f

WANTED—Blacksmith; one or two years experience; state wages wanted, with board. Apply to W. Butchart, Lion's Head, Bruce County, Ont. f

We make Electric Fixtures, Sockets and Cut-Outs

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

Linolite.

SINCE the advent of the electric lamp in different forms and sizes shop window lighting has become quite an art. The method of throwing a brilliant light on the goods on exhibition and at the same time screening the light from the eyes of the onlooker, is an ideal one. One of the developments in this line is called linolite which has just been introduced. It consists of a number of long vacuum tubes enclosed in a semi-circular channel of highly polished aluminum. Instead of the filaments of the lamp being coiled as is the case in the ordinary glow lamp, they are carried from end to end of the tube, the terminals and holder being at each end; a small loop occurring in the length provides for expansion. One great advantage of this method of lighting shop windows is that the space occupied is so small, the overall width of the metal channel being only two and a-half inches and the depth one and one-eighth inches. The weight is about one-half pound per foot run and consequently it can be fixed in places where other illuminating devices are not convenient. The edge of the semi-circular aluminum channel is beaded over and each of the beads carries one of the electric wires. For one hundred and ten volt circuits short branches are led off to each of the holders as for ordinary glow lamps, but for 200 volt circuits and lamps are arranged two in series.

Miniature Lamp Situation.

An attempt was made recently to effect the combination of the interests manufacturing miniature electrical lamps in the United States, and some of the prominent manufacturers of these goods refuse to come into the agreement. There has been a wonderful increase in this business of late years, and the manufacturers have been reaping the benefit. Recently some of the makers commenced cutting prices with the intention of diverting desirable trade in their direction. Some of the

dealers state that they neither wish to get trade by underselling nor to form an agreement by which consumers may

have to pay an exorbitant price for the goods. Meanwhile there is considerable cutting in miniature lamps.



THE
TOP
THAT
THE
SUN
NEVER
SETS.
ON

The Tarbox Self Wringing Mop Cotton Mop Cloth

with that famously popular knitted

Prices Reduced in sympathy with Lower Cost of Cotton

Do not overlook this when ordering kindred stock—the best houses, wholesale and retail, carry them.

Manufactured by

TARBOX BROS., = Toronto, Canada

Its Good Points:

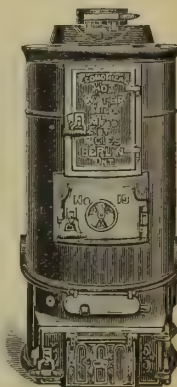
Grate quickly and simply removable.
Short water travel. Long fire travel.
Water sections cast with incline surface, giving quicker movement to the water.
Fire travel all the way round.
Water sections don't touch outside.
Return pipes—2 in number—do not chill and put out fire.

The "Economical" Hot Water Boiler

is the most perfect made.

100 enthusiastic users right in Berlin. Send for Catalogue.

P. Gies, Founder, Berlin, Ont.



GAS BRACKETS AT LOW PRICES.



No. 120, Gas Bracket, without candle, 80c.



No. 122, Gas Bracket, \$1.10.



No. 126, Gas Bracket, without candle, \$1.00.

These prices net to the trade only.

Send for bulletins Nos. 10 and 11 for others. Everything in gas supplies and everything electrical.

The Sayer Electric Co'y, 10-14 Beaver Hall Hill, MONTREAL

To the Retail Hardware Trade of Canada:



This advertisement will show you how we are trying to interest the consumer.

The public is interested, for we get enquiries every day from all over Canada

We are willing to help you in other ways to sell our goods.

*We have a proposition
that will interest you.
Write us.*

RETURNED

DEC 17 1904

Cur Book
file 9



What a source of delight it is for a housekeeper to know that even if her potatoes boil dry and scorch at the bottom, there is no burnt taste to them!

THIS IS TRUE ONLY WHEN

**AN
ALUMINUM
KETTLE**
Is Used.

It imparts no burnt taste; never cracks nor chips; never burns nor rusts, and no danger from poison. Easily cleaned and polishes like silver.

The price of all Aluminum Goods is now reduced.

Made by the **CANADIAN ALUMINUM WORKS, Limited**

OFFICE: 13 ST. JOHN ST., MONTREAL.

FACTORY AND FOUNDRY: CHAMBLY CANTON, QUEBEC.

Catalogues to the trade on application.

The Canadian Aluminum Works, Limited, Montreal.



QUITA RANGE

A New, Light and Inexpensive Steel Range.

Burns Coal, Coke or Wood.

Has a three-piece expansion top, large drop broiler door, large end shelf, duplex grate which is reversible for coal or wood, large ash-pan, sectional leg base, interchangeable flush reservoir and a handsome high shelf.

The Quita, although a cheap range, has all the strong points of our better lines.

Burns Coal, Coke or Wood.

No.	Cooking Holes	Size of Oven, Ins.	Length of Wood Fire Box, Ins.	Shipping Weight, lbs.		Tel. Code	
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				240	250	Canoe	Camlet

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HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN.

Montreal.

The MacLean Publishing Co. Limited

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ENTERPRISE.

IT is sufficient to point to our report of the big Atlantic City convention, which appears on a subsequent page of this issue, to prove that Hardware and Metal is not only eager and willing to serve the best interests of the hardware trade of Canada but is actually doing so. Not only in word but in deed is this paper striving to advance the cause of Canadian hardware dealers and the manufacturers of hardware throughout the land.

A staff correspondent from this paper was on the ground at the opening of the convention; he closely watched all the proceedings, and in his report summarizes for the benefit of our readers just what was accomplished at the several sessions. It was deemed highly desirable that this paper should be represented at the convention, and the wisdom of the publisher's action in sending a special correspondent has been amply justified in many ways.

It is also worth noting at this juncture that Hardware and Metal was represented at the recent meeting of the Iron and Steel Institute at New York, so that our readers need have no apprehension that any event of importance to the trade is passed over without receiving the attention of the proprietors of this paper.

COPPER SCARCITY.

THE extraordinary demand for copper at the present time, coupled with an ordinary output, has created a scarcity of this metal such as has not been felt for some time. As fast as it is being mined it is placed on the market, but the demand is so much in excess of the supply that the situation shows no sign of being relieved. The market has advanced considerably and is now very firm with an upward tendency. None of the metal merchants have any stock on hand. There is none being placed for sale and therefore no near prospects of stocks being replenished. Any available supply has been absorbed by the larger companies, who foresaw the present contingency and ordered ahead. Many months will probably elapse before the situation will be changed. The reason attributed for this unusual situation is the enormous and fast increasing demand for copper in the electrical industries.

RECIPROCITY IN COAL.

We direct attention to a paragraph from the Ottawa Journal on the subject of Nova Scotia coal.

From reports in Nova Scotia papers, we judge there are two movements on foot. One is to secure reciprocity in coal in order to obtain an outlet in New England. The other aims to push the Nova Scotia market past Montreal into Ontario. That province not being a natural market for that coal, it follows that its supporters rely upon the ascendancy of protectionist doctrines to succeed.

The interests of the manufacturers and consumers of Ontario Province lie in the direction of making reciprocity palatable to the mine owners in Nova Scotia. The low rate of freight, 60c from Louisburg to Boston, is a powerful argument in favor of that solution.

CANADIAN TRADE WITH JAPAN.

UP to the commencement of the Russo-Japanese war the nations of the world had little idea of the strength or importance of Japan, either in connection with her material resources, or the possibilities of the extension of a trade that is now not only awaiting, but fast seeing development. Even after her first brilliant successes the opinion was generally held that, as the victories represented no tangible assets, she would not long be in a position to continue the war. How erroneous this idea is has been strongly demonstrated by the ease attending the recent issue of her war loan. Whatever may be the outcome of the present war, there is no necessity of discussion. That Japan has come to the front as one of the great nations there is no denying, and, win or lose, the eyes of the commercial world are upon her with a view to future trade relations.

In 1894 England entered into a treaty with Japan, and to-day her manufacturers and merchants are reaping the benefit, as a large volume of trade has been the result. Canada refused to be a party to this treaty, which, in the face of later development, seems rather unfortunate. Geographically we are much better situated for trade relations with Japan than England, or other of the European powers. With her enormous population, fast adopting all the modern methods that art and science have given to Christian countries, she offers a channel for trade that is being generally appreciated and fast being exploited.

Canada has a commercial agent in Japan who is doing good work in pointing out Canadian opportunities. Since the Japanese exhibition at which Canada had an interesting exhibit, trade has increased very materially. In spite of our favorable situation, and in spite of the establishment of a commercial agency in the Mikado's country our exports to that country have not increased at the rate they should, and this is due no doubt, in a great measure, to the fact that our political relations are not close enough. If a proper treaty were entered into between the two countries there is every reason to believe that the Japanese would become consumers of a good share of the export products of the Dominion.

WILL RECIPROCITY BE AN ISSUE?

AS will be seen in our report of the convention of the National Hardware Association of the United States a feature of this influential meeting was the great interest manifested in the movement for reciprocal tariff arrangements between Canada and the United States.

The expression of feeling in favor of reciprocity, especially by the manufacturers present, was general and vigorous. The question is thus raised, will reciprocity be an issue in the practical politics of Canada and the United States within, say, the next four or five years?

For the answer, we must look to the United States rather than consult our own "men of affairs."

In the past Canada has been the suppliant several times. Deputation after deputation from this country has visited Washington asking for a reciprocal tariff treaty. Each time callous indifference or stinging refusal has been the result.

The last official attempt to bring about reciprocal trade relations between Canada and the United States was made in 1898 when the Joint High Commission met in Washington. That, like all previous attempts, proved abortive.

Shortly after the Joint High Commission disbanded Sir Wilfrid made a speech before a meeting of representative business men, the Canadian Manufacturers' Association. In it were the significant words, "We go no more to Washington for tariff favors." This is the Canadian sentiment to-day. And while a proposal from the United States for a consideration of the reciprocity question would probably be courteously entertained, no one in this country believes that a fair measure of reciprocity—in the near future at any rate—is likely to be obtained from our neighbors to the south. They do not want to give and take. They simply want to take.

This expression was received with great acclaim at the meeting and away-

ened a responsive chord throughout Canada. It is yet referred to as one of the most statesmanlike and patriotic utterances of the Canadian Premier.

Its point is not that Canada is opposed to reciprocity, but that this country has reached the point where the role of "a most persistent beggar" should be dropped for all time.

So the next move toward reciprocity must be made by the United States. It has for some time been what one terms a "dead issue" in Canada. In fact, the tendency of Canadian sentiment is now toward full protection for Canadian industries.

Have we reason to expect the adoption of Canadian reciprocity as a plank

INDIA HEARD FROM.

HARDWARE AND METAL:

As you have been saying something recently about the foreign circulation of **HARDWARE AND METAL**, I write to say that I was recently in receipt of an enquiry for price lists, etc., of "Solarine" from Madras, India. Thinking this might be of some use to those doing export trade to advertise in your paper, and wishing you success, I am

Yours respectfully,

H. F. FALKNER,

Toronto, November 23, 1904.

in the tariff of either of the two great parties of the United States?

The unanimity of sentiment at the Atlantic City convention would point to an affirmative answer. Another consideration must be recognized, too, which is likely to have a bearing on the question. The industrial expansion of the United States has, during the last decade or two been so remarkable that sooner or later that country must look to outside markets for a larger sale of its products.

Can these markets be obtained while the exceptionally high tariff continues to operate in the United States against other countries? Hardly.

Another consideration which may be an influence toward reciprocal arrange-

ment is the decadence of farming in the New England States. These States want Canadian farm products of all kinds. Good prices are paid; the markets are regular; the demand enormous.

Tariff readjustment in the United States is inevitable just as it is necessary in Canada. What direction will it take? The question is one of vital interest to all Canadian business men.

CUTTING IN LANTERNS.

ONE of those unaccountable things that happen when all governing circumstances tend towards the exact reverse, is what might be directly applied to the situation in the lantern market in Canada to-day, where prices have been cut twenty-five per cent. below the selling price that has prevailed for the last five years. In spite of the fact that labor in this line is scarce, and that the demand has been particularly good recently, and above all, in spite of the very large advance in the price of raw material with a firm market still prevailing, the reduction mentioned has been made. This must represent the major difference between profit and loss. Cold blast lanterns, which have been selling at seven dollars a dozen, are now being offered freely by manufacturers and jobbers as low as five dollars and twenty-five cents in dozen lots, and five fifty in small lots. When the manufacturer has allowed the jobber a small margin on this price, for marketing the goods, there is no question but that he is manufacturing with a reasonable prospect of loss. It is understood that there is not much likelihood of the manufacturers getting together and coming to any settlement. Until the past few weeks there was an agreement among the makers of lanterns as to the maintenance of prices, but now that this has been broken the prices at present quoted will probably continue for several months. It seems a case of the survival of the fittest, but in the meantime the retailer has nothing to complain of as he is getting the benefit of the reduction in prices.

WHAT ABOUT THE COAL DUTY?

(Journal, Ottawa).

IN the affairs of this Dominion the little Province of Nova Scotia has been heard from in the past, and since the events of the 3rd of November, is not likely to be dumb. Just now the coal question is bothering her. She is commencing to raise a surplus of coal, which she wants a market for. New England would do for the market if a United States duty of 53c per ton against outside coal did not interfere. Ontario would suit also but that Pennsylvania coal can be delivered there at most points at cheaper prices than the carriage alone on Nova Scotia coal. The proposition is thrown out that Nova Scotia may ask Mr. Fielding to double the duty in favor of Nova Scotia coal.

The battle cry of the manufacturers, "Sufficient protection to hold the domestic market," is equally good for coal producers, and while the manufacturers may not relish the presence of these new allies in their procession to Government Hill, they may have to keep step with them.

Meanwhile, what the consumer would like—the person who buys coal for his home or business—would be to see the duty on coal abolished altogether.

WILL MANUFACTURE IN CANADA.

An important event in hardware circles is the announcement made in this number of Hardware and Metal by the Wilcox Mfg. Co., of Ontario, Limited, London, that they have made arrangements with the Chicago Hardware Co., of North Chicago, to manufacture their line of builders' hardware in Canada. The Wilcox Co. are also about to erect a modern factory for the manufacture of lines of hardware hitherto imported by them or made by other firms under contract with them. This will give them a considerable advantage hereafter on the Canadian market.

NEW BRUNSWICK IRON CO.

A new iron company is just being organized at Lepreaux, Charlotte County, N. B., to be called the New Brunswick Iron Co., Limited. It will be capitalized at one million dollars, made up of one hundred dollar shares. Its powers are to include the searching for, mining, quarrying, refining, and preparing for sale, iron, coal, and other minerals, as well as the construction and maintenance of electric railways, telephone and telegraph lines, and the generation and sale of electrical power. Application for incorporation will be made at the next meeting of the New Brunswick Government. The directors are: John S. McLellan, of Sydney, capitalists; Chas. W.

Young, St. Stephen, gentleman; Leonard B. Knight, St. John, lumber merchant; A. D. Wetmore, Truro, electrician, and C. V. Wetmore, Sydney, insurance broker.

PERSONAL MENTION.

Mr. H. A. Bald, plumber, of St. Catharines, was a visitor in Toronto on Wednesday, attending the Liberal convention.

Mr. John Klinek, hardware merchant of Elmira, was last week united in marriage to Miss A. Mehlhausen, of Elmwood.

Mr. F. Childs, a hardware merchant of Gravenhurst, paid a visit to the leading wholesale hardware firms of Toronto this week.

Mr. J. W. Johnston, manager of the retail department of Rice Lewis & Son, Toronto, has returned from his visit to the Exposition at St. Louis.

Mr. C. F. Somerville, president of the Ontario Lead and Wire Co., Toronto, is paying a visit of a business nature to Sarnia, Detroit and Petrolia this week.

Mr. Peaker, Sr., of Peaker & Son, hardware and plumbing merchants, Brampton, was a visitor in Toronto this week, calling on a number of the wholesale houses.

Mr. A. W. Caldwell, representing the Wrought Iron Range Co., of Toronto, passed through Montreal from Quebec last week. Mr. Caldwell paid a friendly call to the offices of Hardware and Metal.

Mr. John Bertram, president of the John Bertram Engine Works, Toronto, who was reported to be very seriously ill a few days ago, is rallying again and his friends hold out stronger hopes now for his recovery. Mr. Bertram has been sick for some two months, being troubled with appendicitis and kindred diseases, but was never considered in a dangerous condition till a few days ago.

It has taken the Consolidated Lake Superior Company only a few weeks to select a successor to the late Cornelius M. Shields, as manager of the company's works at the "Soo." The appointee is Willard N. Sawyer, of Pittsburg, a member of the firm of Wellman, Seaver & Morgan, manufacturers of shipbuilding plants and large cranes for overhead work. Mr. Sawyer was formerly with the Carnegie Company and later with the Tennessee Coal and Iron Co. He is a steel expert and has an international reputation as a contractor. He is fairly familiar with Canada, having visited this country several times both on business and pleasure. He is a man of middle age.

Business Men in Parliament

A. E. Kemp, M.P. elect for East Toronto.

A. E. KEMP, M.P., who carried East Toronto in the Conservative interest by an overwhelming majority, is of English descent, though born at Clarenceville, Quebec, on August 11, 1858. His grandfather came from Hull, England, settling first in Montreal and then in Toronto. His father was born in Hull.

The member's business career opened in Montreal, when as a boy he entered the firm of Prouse Bros., rising to be cashier. After five years' service, he started into business for himself in the wholesale furnishing line. In 1885 he moved to Toronto and two years later



A. E. Kemp, M.P.

he succeeded to the business of the Dominion Tin and Stamping Works, a manufacturing concern which had started operations in 1866. Mr. Kemp has had remarkable success in the industrial world and to-day the firm of A. E. Kemp & Co. is known far and wide, as one of the premier institutions of Canada. Over 300 hands are employed and over 2,000 different articles of metal are manufactured.

Mr. Kemp has always taken a prominent position in the business life of his home city. He became a member of the Board of Trade in 1891, and passing through the various stages of office ultimately became president in 1899, holding that important position for two years.

SOME CONVENTION IMPRESSIONS

Staff Correspondence of HARDWARE AND METAL.

TENTH
ANNUAL
CONVENTION

The National Hardware Association of the U. S.
The American Hardware Manufacturers' Association,
At Atlantic City, November 16 17 and 18, 1904.

BY a thorough organization the wholesale hardware merchants of the United States are doing a great work towards the betterment of business relations in the hardware trade in the United States.

Ten years ago the National Hardware Association of the United States was formed. Each year has seen an extension of its membership, a strengthening of its influence. In the early years many prominent manufacturers looked upon the movement with suspicion, but soon such fears were dispelled and since the organization of the American Hardware Manufacturers' Association the two bodies have harmoniously worked together for the general improvement of trade conditions. To-day the power of the united bodies is so great that it is generally recognized that all action taken should only be after careful, thorough consideration has been given to the problems arising. After any action has been taken it is generally made effective and the authority of the organization recognized.

The main considerations at this tenth convention of the National Hardware Association were "catalogue houses" and "special brands."

• • •

The catalogue house problem has assumed even greater proportions, reached a more critical stage, in the United States than in Canada. This question is one that has absorbed much attention in previous conventions of the two associations. Last year a committee was appointed to deal with the matter in conjunction with representatives of the National Retail Hardware Association and of the Southern Hardware Jobbers' Association.

The first references to this question were made in the opening session when, under the chairmanship of President Samuel A. Bigelow, of Boston, a colloquy on "What are the Proper Avenues for the Distribution of Hardware and Kindred Lines?" was contributed to by

G. E. Corbin, of the Corbin Cabinet Lock Co.; W. P. Bogardus, president of the National Retail Hardware Dealers' Association; Samuel E. Winslow, of the Samuel Winslow Skate Mfg. Co., and Geo. M. Reuter, Jr., of the American Wringer Co.

Mr. Corbin drew attention to the various means the manufacturer was often forced to adopt to reach the consumer, pointing that in many cases the jobbers refused to carry a full line made by a manufacturer, and counselled careful, wise consideration of the question. Mr. Bogardus argued that as a tree is dependent for strength on its small fibrous roots so is a manufacturer dependent on the retailer for the distribution of his goods. Therefore the manufacturer has a right, was under a moral obligation, to protect the jobber and the retailer by preventing the cutting of prices on his goods. Mr. Winslow had found that the only way to do a profitable trade in skates was to recognize the jobber and retailer and to protect them

Mr. Winslow was quite in accord with the movement to protect the jobber and the retailer. His company had determined on that policy in February, 1902, and found it satisfactory until the present year when an advance in crude rubber made an advance in wringers necessary. Some of the trade, having on hand large stocks bought at the old prices, had not maintained the advance, consequently prices were unsettled at the moment. This was a condition that no manufacturer could control.

Further reference was made to catalogue houses on Thursday morning, when the report of the "Catalogue House Committee" was received. This meeting was of an executive nature, but it is permissible to state that real progress was made in the direction desired. In fact, the committee have, through Secretary T. J. Fernley, given out that "manufacturers have generally admitted that the quantity of goods sold by the catalogue houses was extremely small when compared to their total production,

and have begun to realize that it is not to their interest to have quotations made which prevent those who distribute their goods to retailers and to consumers from making at least a margin of profit to cover the services rendered."

Among the houses which have signified their intention to discontinue the sale of their goods to catalogue houses are the following: Henry Disston & Sons, Stanley Works, American Axe and Tool Co., Fayette R. Plumb, Inc., H. B. Black & Co., Covert Mfg. Co., Norton Tool Co., Hermann Boker & Co., Hamilton Rifle Co., James H. Mann, Mann Edge Tool Co., Eagle Lock Co., Dunn Edge Tool Co., Russell & Erwin Mfg. Co., Hussey & Binns Shovel Co., Evansville Tool Works, Kelley Axe Mfg. Co., Finley Axe and Tool Co., Germantown Tool Works, Hopkins & Allen Arms Co., White Mountain Freezer Co., J. Stevens Arm and Tool Co., McKinney Mfg. Co., F. E. Myers & Co., Schollhorn Co.

• • •

A feature of all conventions of these associations is their social side. Fully one-fourth of the attendance was constituted of wives and daughters of the members. Nor were they a passive element in the gathering. Executive ability that compared to advantage with that of the men was displayed time and again by the ladies in their preparation for and their management of the social functions in the evening, which proved features of decided interest.

The influence of the ladies on both the attendance and the enthusiasm was noticeable every day of the convention and was recognized in a generous, far-sighted manner by the officers of the association.

Incidentally a tribute might well be paid to the courteous, warm-hearted reception given to the Canadian delegates, which consisted of President C. A. Whitwam, of the Hobbs Hardware Co., London, Ont.; Secretary James Hardie, Toronto; Geo. Caverhill, of Caverhill, Learmont & Co., Montreal; William Stark, of the Stark Hardware Co., Montreal;

and D. O. McKinnon, of Hardware and Metal.

Messrs. Whitwam, Hardie and Caverhill addressed the meeting at the opening session, their speeches being received with hearty enthusiasm by the assemblage. Needless to say, these gentlemen gave their listeners some interesting information about the growth of Canada.

* * *

The arrangement by which the manufacturers meet in association at the same time as the jobbers is an excellent one. Apart from the very desirable development of warm social relations between the two branches of the hardware and metal trades the opportunity to freely discuss the various problems which arise is one of untold value.

In all probability such a step may be taken in Canada before long. A party of Pittsburg manufacturers have asked Secretary Hardie to notify them in ample time in advance of the annual meeting of the Canadian association. A similar proposal was made by several Connecticut manufacturers. The matter will, doubtless, receive full consideration. Yet, as the relations between Canadian jobbers and manufacturers is now practically an ideal one, it would be futile to prophesy what steps the jobbers will take.

* * *

Another feature of the convention, one which was of great significance to Canadians, was the frequent expression of a desire for reciprocity with Canada by the manufacturers, especially those from the New England States. This subject was the topic of conversation so often and the favorable views regarding it were expressed so freely and so vigorously that the Canadians present were convinced that the question will sooner or later be a vital issue in United States politics.

An instance which illustrates the feeling on the question might be cited. The writer, after the convention was over and most of the delegates had gone home, was invited to dinner with three members of the executive of the National Association. All of the three are manufacturers as well as jobbers. One was from Boston, another from Cleveland, the third from Pittsburg. Each of them has a wide connection and wields a large influence in the United States.

In reply to an inquiry regarding the matter each of these three men express-

ed himself as enthusiastically in favor of Canadian reciprocity. The Boston merchant had, during the recent Presidential election contest, signed a petition pledging support to the Republican ticket but demanding—not asking, but demanding—Canadian reciprocity as a plank in the Republican platform. The Cleveland and Pittsburg merchants agreed that the movement for reciprocity was much more advanced in the New England States than in Ohio or Pennsylvania, yet they both declared that the question was receiving more and more attention in the latter States and that they believed it would, in all probability, be a practical issue before very long.

This conversation was quite representative. Practically every manufacturer present whom the writer had conversation with asked regarding Canadian feeling on the subject, and expressed a favorable opinion himself without hesitation.

The question is one of vital interest to Canadian manufacturers and business men generally. Even after one has discounted the fact that these views were largely expressed by manufacturers who may look at the matter from a different light to other classes in the United States one cannot fail to realize the possibility of this question as an issue in United States politics in the near future. If the big Republic should declare in favor of reciprocity what would be Canada's answer? At present the tide of feeling is for protection, for the development of Canadian industries. But would that sentiment be strong enough to withstand a reasonable offer of reciprocal trade from the United States?

* * *

Closely related to the movement for Canadian reciprocity—probably the cause of it—is the growing interest in Canada by the business men of the Republic. In the years gone by Canadians travelling in that country have been startled at the general ignorance of Canada; to-day the reverse is the case. The knowledge that from 60,000 to 75,000 people have left the United States for the Canadian Northwest each year for some time seems to be general; the fact that Canadian trade has doubled in seven years is known to the majority. What has created most interest in Canada, however, has been her expansion as a consuming and purchasing country. Many manufacturers, especially in New England, have found their business in

Canada to show an even larger proportionate growth than their business in the United States. Much concern is, in consequence, felt regarding the growth of protectionist sentiment in Canada, culminating as it has in the "dumping clause." This clause has literally "shut out" of the Canadian market several firms whose business there was of serious moment to them and has so alarmed others as to the possibility of further protective measures that they are giving serious thought to the tariff relations between the two countries. Judged from an entirely Canadian standpoint the "dumping clause" has undoubtedly been a most effective measure. Without unduly increasing the duties it has demonstrated beyond question the strength of protective sentiment in Canada, has turned the attention of many United States manufacturers to Canada as a good country wherein to establish branch factories, and has interested many more in the movement for Canadian reciprocity.

* * *

During the last few weeks the announcement has been made that Henry Disston & Sons, Philadelphia, and the American Axe and Tool Works, Glassport, Pa., had decided to establish manufacturing works in Canada. These firms have been influenced to take this step by the dumping clause. But they are only the vanguard of a procession of United States manufacturers who will put up branch factories in Canada during the next few years.

If the Canadian Government would take the same steps to advertise Ontario and Quebec as manufacturing centres that were taken to advertise the agricultural resources of the Canadian Northwest the results would be even more remarkable than has been the case in the latter campaign. Manufacturers in the United States are seeking information and now is the "psychological moment"—to use Hon. Clifford Sifton's phrase re the Dominion Exhibition at Winnipeg—to give them the desired facts and figures.

* * *

Many of the manufacturers have recognized in this convention an unusually good opportunity to advertise in one way or another.

The most elaborate and also the most effective step in this direction was taken by the Reading Hardware Co., Reading, Pa. This firm went to Atlantic City in

force, taking about seventy-five representatives and a brass band, which did much to keep up the enthusiasm. One of the end corridors of the hotel, with all the rooms leading from it, was taken, and an exceedingly attractive and comprehensive display of ornamental brass goods, lamps, builders' hardware, gasoliers and electric fixtures was shown. That none of the delegates should forget this display the firm gave to all either an ink stand or a paper weight in silver or bronze.

The American Axe and Tool Co., Glassport, Pa., gave away as their memento a handsomely decorated hatchet.

North Bros. Mfg. Co., Philadelphia, gave a daily demonstration of the merits of their new ice cream freezers. In addition to the ice cream, which proved a popular attraction to the ladies, a beautiful medal, showing the famous "Liberty Bell," was given to all delegates.

The Lufkin Rule Co., Saginaw, Mich., was on hand with office rules for the men and spring steel tapes for the ladies.

One of the noisy souvenirs, a black bottle "kazzoo" was distributed by the

Iver-Johnson Arms and Cycle Co., Fitchburg, Mass.

An extremely dainty souvenir fork in sterling silver was given by Simeon L. and George H. Rogers Co., Hartford, Conn. This firm also distributed miniature silver spoons which were generally worn during the convention.

One of the most popular souvenirs obtainable was that given by the Chicago Hardware Co., Chicago. This contribution was a profile head in bronze of the late President McKinley. The desire for these models was a touching evidence of the esteem in which President McKinley is still held.

The Union Metallic Cartridge Co., New York, distributed a nail file mounted on a brass cartridge shell, while the Peters Cartridge Co., Cincinnati, gave a nickel paper cutter similarly mounted.

The Russell & Erwin Mfg. Co., New York, gave to the trade a brass lock screwdriver, so constructed that the dealer could carry it as a watch guard or in the vest pocket and use it for unscrewing a lock to show a customer its mechanism. This was a most useful souvenir and was much sought after.

The Boss Washing Machine Co., Cin-

cinnati, O., gave away hundreds of celluloid, nickel mounted match boxes.

The Simonds Mfg. Co., Fitchburg, Mass., had for the gentlemen a miniature saw for watch fob and for the ladies miniature saw hat pins. These were in general evidence.

The L. & I. J. White Co., Buffalo, N.Y., gave to all members and delegates a dainty matchbox of stamped steel.

Not to be outdone by anyone Kampfe Bros., New York, gave to many of those present a full set of their "Star" safety razor. The writer was one of the favored in this respect, and if permitted will insert a remark that the razor was found to do all that was claimed for it.

One of the favorite souvenirs was a small "Maple Leaf" pin presented by the Canadian Wholesale Hardware Association. There was also a big demand for the "Royal Ensign" distributed by Hardware and Metal.

Several other souvenirs were given out but the writer was not present at their distribution, so cannot give descriptions. Suffice it to say nearly every member or visitor sought and secured as many souvenirs as they could conveniently carry home.

MANUFACTURERS
AND DEALERS IN HIGH-GRADE

PLUMBING GOODS

We have some choice **Lavatories** with Apron (similar to cut), in both Corner and Flat Back Pattern, Class A and Class B.—at low prices.

These make a neat and attractive fixture for Showroom.

Send for catalogue of
BATH-ROOM FIXTURES
showing SOAP DISHES,
SPONGE HOLDERS,
TOWEL RACKS,
PORTABLE SHOWERS, Etc.

A good line for the
Hardwareman.

Use **J.M.T. Cushion-disc**
Compression Work,
neat and everlasting.

THE JAMES MORRISON BRASS MFG. CO.,
89-97 West Adelaide St., TORONTO. Limited



MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Hardware.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Nov. 25, 1904.

CHRISTMAS trade is now receiving more than ordinary attention at the hands of the hardware dealer and consequently there is an activity in these lines that has inspired considerable energy into the hardware business. While staple goods are not in particular demand, there is a general feeling of satisfaction with the volume of business that is being done.

At a meeting of the wire nail interests, held last week, no agreement was arrived at in connection with coming to a definite decision regarding an adjustment of prices, so that the former situation practically obtains at present. Lanterns have been a prominent feature of the market this week, owing to the further cutting that has been indulged in, to which is added a lack of inclination on the part of manufacturers to come to any agreement. There has been an unprecedented demand for skates during the past few days, and some dealers are entirely sold out. Good skating in the country and the commencement of the skating season in the city on Saturday, with the absence of snow, are accountable for this. Sewing machines, cutlery, plated ware, sleigh bells and shovels are other of the particularly strong lines. There is no change in prices.

Hockey Sticks and Pucks—Skating during the past couple of weeks has caused a very big demand for both hockey sticks and pucks. Our quotations are as follows: Boys' hockey sticks, from \$1.50 a dozen up; men's, \$2.25 to \$3.50 a dozen; regulation pucks, \$2 a dozen; juvenile, \$1.15 a dozen.

Plated Ware—The Christmas trade is calling for an unusually large amount of plated ware this season, making it one of the most active lines for the hardware trade. We quote Rogers 1847 goods, 45 per cent off list.

Cutlery and Scissors—Although the entire year sees a steady demand for both of these lines, orders coming in at present are of unusual amount. Quota-

tions for case carvers from \$2 to \$10 per set; scissors in cases, 90c to \$2.

Skates—It might be said that the skating season is now well at hand, as for two weeks past residents of the country district have had a splendid opportunity of indulging in skating. The orders coming in this year are very much larger than usual, so that this gives promise of being a record season. We quote as follows: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Axes—Most of the orders coming in for axes are repeat orders of goods sent in in the Summer. Our quotations are as follows: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—There is a very brisk demand for handles this week. We quote: Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3 \$1.50 a dozen.

Carpet Sweepers—One of the best lines at present. The holiday trade is calling for a large number of these particularly in the higher grades. Quotations are the same as before, \$21 to \$31, a dozen.

Sewing Machines—No other line, with the exception of skates, has seen as much activity during the present week as sewing machines, for which an unusually large number of orders have been received. Our quotations are as follows: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Food Choppers—There has been a marked falling off in the demand so that this line may now be said to be quiet. Our quotations are as follows: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Lanterns—Considerable attention has been attracted to lanterns recently by the wholesale cutting that has been indulged in, the cause of which was the failure of some of the manufacturers to stick to their original agreement. Last week we quoted cold blast \$1 per dozen less than before and now even on the lower quotation there is considerable shading. Prices are: Cold Blast \$6; No. 0 Safety, \$4 a dozen.

Sleigh Bells—There is much less demand for sleigh bells at present than the corresponding week a year ago, as at that time sleighing was good. However, quite a few orders have been received within the past week. Our quotations are as follows: Brass team bells, rough, \$1.80 to \$4.50 a doz.; polished, \$2.10 to \$5 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—Shovels are another of the active lines in the hardware trade. Although we have had no snow large orders have been received in early anticipation. We quote: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent discount Victor, wood, 35 per cent discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Heavy Screw Hooks and Hinges—As noted a week ago there is a scarcity in some sizes. There is little stock moving. Our quotations are as follows: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—Since the close of the hay pressing season there has been little or no demand for annealed wire. Quotations are as before, \$2.25 per 100 lbs.

Barb Wire—Very few orders are noted for barb wire, either for present or for future delivery. We quote as follows: \$2.75 per 100 lbs. f.o.b. Mont-

real, and \$2.50 f.o.b. Cleveland. Car lots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—Dullness exists to a very marked extent in the galvanized wire market. Our quotations are as follows: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 and 8, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Fence Staples—Little stock moving. We quote as follows: \$2.65 per 100 lb. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Rivets and Burrs—The market is fairly active and there is a rumor of a near advance. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—It is thought that an advance will take place shortly, but as yet nothing has been definitely settled. Supplies are none too large and little stock is being sent out. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—Bolts and nuts are seeing considerable activity. A near advance is looked for. Quotations are as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; black bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—The wire nail manufacturers and those representing the wire nail interest in Canada, held a meeting last week and as far as can be learned no settlement of the difficulty was concluded.

It is felt, however, that prices in the near future will be stiffer and less cutting indulged in. We are still unable to quote prices with any reasonable correctness.

Cut Nails—This market is very quiet and the margin for jobbers having been reduced to little or nothing there is no desire on their part to handle this line except for regular customers. We quote as before: \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Horseshoes—The demand for horseshoes is still good and manufacturers are busy keeping the supply up to the mark. We quote: "P. B." new pattern, base price \$3.50 per 100 lbs; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—A good trade is being done. We quote list price as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22s; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. "P.B." brand, 55 and 60 per cent. off list. Other brands, 55 and 60 per cent. off list.

Sporting Goods—Some activity still prevails in sporting goods and although few orders for shot guns and rifles have been received, there is considerable movement in ammunition and shot. Prices on shot guns and rifles remain the same and are to be had on application. On ammunition and shot our quotations are: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand. Standard shot \$6.50 per hundred pounds; chilled, \$7 per 100 lbs.; buck and seal \$7.50 per 100 lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—The long continued dry weather rendering building operations possible has had a good effect on the building paper trade and has resulted in considerable business that would not

otherwise have been done. We quote: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—Raw material is very firm and will probably affect the price of cordage before Spring. There is very little business being done at present. Our quotations are as follows: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c, for 3 and 4-ply bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement and Firebrick—Although the bright weather has had somewhat of a beneficial effect on cement and firebrick, the volume of business has been much less than was expected under the circumstances. Our quotations are as follows: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—There is little activity, with a tendency towards lower prices. Our quotations are as follows: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3, one inch, \$2.95.

METALS.

Not since seven or eight years ago has there been a boom in the metal market similar to the one now taking place. The advances are mainly due to industrial activity, rather than any speculative tendency of the market. While ingot copper and antimony are the only two metals on which prices are quoted higher in the local market, there have been further advances in the primary market in pig iron, zinc, tin, lead and galvanized iron. Pig iron, which is active, is expected to be quoted higher shortly. There is considerable activity and a good deal of stock moving in this market. In scrap metal conditions continue as before, with the exception of an advance in copper, and a little more movement in scrap metals generally.

Pig Iron—The primary markets are very firm and it is expected that in the

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CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
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Deseronto Iron Co.

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Manufacturers of

CHARCOAL PIG IRON

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Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required: Strong, High Silicon Iron, for Foundry Purposes.

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BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
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C.F. JACKSON & CO., Limited

Importers and Commission Merchants
151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

near future local prices will be quoted higher. There is considerable movement. Quotations are:

"Disc," No. 1.....	\$16.50 delivered Montreal.
"Dom.," No. 1.....	17.50 "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 "
" No. 3.....	16.50 "
" No. 4.....	16.00 "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 "
Glengarnock.....	20.00 "
Gartsherrie.....	19.25 "
Carnbroe.....	18.50 "
Carron No. 1.....	19.50 delivered Montreal.
" (special).....	18.50 "
Ayresome No. 1.....	18.00 "
" No. 3.....	17.50 "
Clarence No. 1.....	17.00 "
" No. 3.....	16.50 "
No. 1 Cleveland....	17.00 "

Bar Iron—Last week an advance of 5c a hundred lbs was noted in bar iron, with a particularly active market. While the market is very firm no change in price is noted and manufacturers are very busy keeping up with the demand. We quote: Merchants' bar, \$1.77 1-2 horseshoe iron, \$2.02 1-2; forged iron, \$2.02 1-2, net cash thirty days.

Tool Steel—Merely a nominal movement exists in the tool steel market. Prices remain as before. Our quotations are as follows: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 71-4c; Conqueror High Speed steel, 60c.

Merchant Steel—There is no change from advance of 5c in merchant steel quoted last week. We quote: Sleighshoe, \$1.82 1-2; tire, \$1.92 1-2; spring, \$2.75; toecalk, \$2.42 1-2; machinery (iron finish), \$2.02 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.82 1-2; rivet, \$1.82 1-2; net cash thirty days.

Cold Rolled Shafting—A steady demand exists for cold rolled shafting in which market there is little change. Our quotations are as follows: Cold rolled shafting, 3-4 in., to 17-16, \$3.85 per hundred lbs; inch and a half to 3 inch, \$3.50 per hundred lbs.

Canada Plates—Canada plates are quoted higher in Great Britain and the local market is considerably stiffer. Although no change in price is noted there is considerable activity. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—Spring orders have been placed to some considerable extent and the present demand is fairly good. Quotations as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05;

Sheet Zinc Sheet Copper

and other Metals.

From Stock or for Import.

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Anti-Freezing Pumps

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You ought to lay in a stock of our

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They are the best line you can handle because your customers will be perfectly satisfied when they find their pumps will work on a zero morning.



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THE R. McDOUGALL CO., LIMITED
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"ALPHA" HIGH SPEED STEEL

Crucible Cast Steel
for Tools of all kinds.

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NEW GLASGOW, N.S.

Manufacturers of

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And SIEMENS MARTIN

OPEN HEARTH STEEL

19 to 20 gauge, \$2 20; 8 to 10 gauge \$2.30.

Galvanized Iron—Very material advances in galvanized iron have taken place in the British market within the past week. It is expected that local quotations will be advanced soon. Our quotations are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Antimony—Another very striking advance took place this week in antimony, ranging from £2 to £3, giving rise to an advance of a cent and a quarter on the local market. Quotations this week are 9 1-4 to 9 1-2c.

Sheet Zinc—While steady advances have taken place in sheet zinc from time to time recently, the most material advance has taken place within the past week, of about 30s a ton on the primary market. The higher prices quoted last week have not been increased. Quotations are: Case lots, \$6.50 to \$6.75, and small quantities \$6.75 to \$7.

Tin Plates—A firmer market prevails and at the same time there is less stock moving. We quote as before; Cokes, \$3.75; charcoal, \$4.

Ingot Tin—There is a marked activity in ingot tin this week and the advanced prices noted a week ago still hold. We quote 32 to 32 1-2c, with no shading whatever.

Ingot Copper—Another advance is noted in copper this week, following a succession of advances for some time past. The copper market is experiencing an unprecedented scarcity. All the available supply is in the hands of a few and there is little prospect of getting stocks for some time to come. Advanced quotations this week are 15 3-4 to 16c, the former price being for quantities only.

Ingot Zinc—No further advance is noted over the increase in price of a week ago, although another and higher price will be quoted shortly. Quota-

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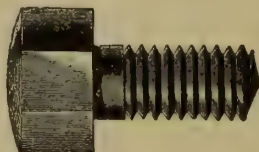
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tions are 6 1-4c to 6 1-2c, the former being firmly held and for quantities only.

Pig Lead—The price of pig lead has

reached a very high mark, but even so the market continues firm with a decidedly upward tendency. The demand is very considerable. We quote: \$3.50

to \$3.60, no concessions being obtainable on the former price.

Boiler Tubes—Quotations on these are given for the first time this week. The market is firm and active. We quote: Highest grade soft steel British and American tubes, one and a half inch, 71-2c; 2 in., 81-2c; 2 1-2 in., 10c; 3 in., 12 1-4c; 3 1-2 in., 16c; 4 in., 20c; 5 in., 45c. Price per foot net.

Scrap Metal and Old Material—The scrap metal market is marked by little change other than a slight advance in copper and considerable activity therein. There is also a brighter feeling and more demand for wrought iron. Our quotations are as follows: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 2 1-4c; zinc, 23-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 51-2c.

ONTARIO MARKETS.

Hardware.

Office of **HARDWARE AND METAL**,
10 Front Street East.
Toronto, Nov. 25, 1904.

THE market shows no change in quotations this week. The expected change in the price of clothespins has not as yet been given out. There continues to be a general briskness on the market, this briskness being especially noticeable in those lines affected by the approach of the Christmas season. There is still a fair demand for ammunition and shot guns, but of course now that the deer shooting season has closed it is to be expected that there will be a considerable falling off in the demand for cartridges. Some orders for barb wire for future delivery are coming in. The wire nail situation is unchanged. There is a large volume of business being done in bolts and nuts, and also in rivets and burrs. The demand for screws is also very good.

Lawn Mowers—The trade is interested and orders are already coming in. Prices for 1905 are as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discount 50

per cent. with freight concessions in quantity shipments.

Guns and Ammunition—The deer shooting season is now over, and as a consequence the demand for cartridges has fallen off. However, there is still a fair demand for shot guns and shot-gun ammunition.

Washing Machines—Our quotations are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Downswell, \$36; New Century, \$72; Capital, \$42; Magic, \$25; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48, Dandy, \$30.

Chain—We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Clothes Reels—The Davis (W. L. Co.), 40 per cent. off list.

Barb Wire—Orders for delivery in the future are coming in well. We quote \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

Galvanized Wire—Some business is doing with prices steady as below: No. 5, \$3.45; Nos. 6, 7, and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Inquiries continue regarding prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—The situation on this market shows no change. As yet no agreement has been arrived at regarding the price of nails. An apparently fair quotation is about \$2.25 per keg f.o.b. Toronto, with car lots at \$2.20.

Cut Nails—There is still a fair business doing though prices are comparatively firm. We quote: \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Prices are as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and small-



Corrugated Iron

*For Sidings, Roofings,
Ceilings, Etc.*

Absolutely free from defects—made from very finest sheets.
Each sheet is accurately squared, and the corrugations pressed one at a time—not rolled—giving an exact fit without waste.
Any desired size or gauge—galvanized or painted—straight or curved.
Send us your specifications.

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WHOLESALE MANFRS. LIMITED
TORONTO, CANADA.

er, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is fairly good in this line. Prices remain unchanged. Quotations are "C" brands, 40, 10 and 7 1-2 per cent.; "P.B." brands, 55 to 57 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—There is a considerable amount of business being done on this market. Prices are firm. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—There is a good trade being done, with prices firm at last week's quotations. We quote as follows: Iron rivets, 60 and 10 per cent. discount; iron burrs, 55 per cent.; copper rivets with usual proportion of burrs, 45 per cent.

Bolts and Nuts—The volume of business is very good, with steady prices. We quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up,

55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 1c per lb.

Woodenware—As yet the report concerning the change in the price of clothespins has not been given out. Other prices are unchanged. Our quotations are as follows: Tubs, No. 0, \$11.25; No. 1, \$9; No. 2, \$8; No. 3, \$7; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 62c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

Cordage—Business is being well booked up for rope and the jobbers are preparing for the binder twine trade for next season. Our quotations are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sash cord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2c to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—Demand continues unchanged. Trade is brisk. Prices remain the same and market is steady. Our quotations are as follows: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slater's felt, 60c per roll.

Firebrick—Reports state that there will be a great scarcity of Scotch firebrick before navigation opens in the Spring. The scarcity will not in any likelihood warrant an advance, and prices in general are expected to remain unchanged. Our quotations are as follows: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

Cement—Owing to high freight rates and duties, the price of English and Belgian cements continues to keep abnormally high and results in an absence of inquiry. For this reason we have struck these two brands off the list. Trade otherwise continues briskly for this season of the year. Prices are unchanged. Our quotations are: For carlot orders

f.o.b. Toronto, Canadian Portland, \$1.70; American Portland, \$1.70. For small orders ex warehouse: Canadian Portland, \$1.90 to \$2; American Portland \$1.90 to \$2.

METALS.

The United States pig iron markets continue to advance, and although it was believed in some quarters that lower prices would prevail during November and December the broadening of the demand has made it improbable that there will be any lower prices between now and the new year. Pig iron for delivery before the first of the year is very scarce. The local market for pig iron is in much the same condition as the United States markets. Canadian iron for shipment before January is very scarce, and Midland cannot be had at all. Orders for future delivery are being booked well.

There are at present very light stocks of Canada plates, and there has been an advance of 45c in all-bright. The brass market is much stronger, there being a decrease in discounts of 5 per cent. Pig lead is also much firmer, \$3.60 being now the lowest quotation.

Pig Iron—Further advances on the United States markets are reported. Contrary to expectations the price of pig iron shows no inclination to decline. It was thought in some quarters that during November and December there would be lower prices prevailing, but the good general demand has kept the market very firm. Pig iron for immediate delivery is very scarce indeed. On the local market there is no Midland to be had for delivery before the first of the year, and other iron for delivery before that time is very scarce. Orders are being booked well for future delivery.

Middlesboro, f.o.b., Toronto	18 10
Hamilton, No. 1	18 00
" No. 2	17 50
" No. 1, Hamilton	17 00 to 17 30
Midland, No. 1	18 00
" No. 2	17 00 to 17 50
" No. 1 f.o.b. Midland	16 25 to 16 75
Radnor, f.o.b. furnaces	27 50
Londonderry, f.o.b. furnaces	16 50 to 17 00

Bar Iron—There is an active movement, with prices firm as follows: \$1.80 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tool Steel—We quote as follows: B. K. Morton & Co.'s "Alpha," high speed, 65c; "M" self-hardening, 50c; Standard, 9c to 14c; Jonas & Colver's

"Novo," 65c; Wm. Jessop & Son's high speed, 60c; Standard, 14c; "Chas. Leonard," 8 to 9c; Crucible Steel Co.'s "Rex," high speed, 65 to 75c; self-hardening, 45 to 50c; special, 17c; Black Diamond, 10 to 11c; Sanderson's crucible steel, 8 to 9c; Superior, 12 to 13c. For more complete list see market quotations.

Tin—A very good trade is being done, with prices firm at last week's quotations. Prices are 31 and 32c per lb.

Galvanized Sheets—Prices are firm. A good business keeps up at the prices noted. Our quotations are as follows: Queen's Head, \$4.00 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.00 for 28 gauge; Gordon Crown, \$4 for 28 gauge.

Tin Plates—An excellent demand continues, with prices steady. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—Stocks on the market are very light, and prices are firm. There has been an advance of 45c in all-bright plates. There is a very good trade being done. We quote: All dull, \$2.40; half-polished, \$2.50; and all-bright, \$3.75.

Copper—The market is firm, but there has been no advance on the market as yet. There is an upward tendency on foreign markets. Quotations are: Ingot copper, \$14.75 to \$15 per 100 lbs; sheet copper, \$20 per 100 lbs.

Brass—The market is active and firmer than last week, discounts now being 10 per cent. instead of 15 per cent.

Lead—There has been a further advance in this market this week, there being an advance of 20c on pig lead. Changed quotations are as follows: Pig lead, \$3.60 per 100 lbs; and bar lead \$3.60 per 100 lbs.

Zinc Spelter—There is a very good trade being done, with quotations firm at from 6 to 6 1-4c per lb. for foreign and 5 1-2 to 5 3-4c per lb. for domestic.

Old Material—A freer movement is noted in the market. Prices are unchanged and firm. An advance is anticipated. Our quotations are as follows: Heavy copper and wire, 11 1-2c per lb; light copper, 10 1-2c per lb; heavy red brass, 10c per lb; heavy yellow brass, 7 3-4 to 8c per lb; light brass, 5 1-2 to 6c per lb; tea lead, \$2.35 per 100 lbs; heavy lead, \$2.50 to \$2.60 per hundred lbs; scrap zinc, 3 3-4c per lb; iron, No. 1 wrought, \$9.00; No. 2 wrought, \$2; machinery cast scrap, \$12.50 to \$13; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 5 1-4c;

per lb; country mixed rags, 65c per 100 lbs.

Coal—Trade in anthracite continues good. Prices are unchanged. In soft coal, slack has a good inquiry. We quote the following: Anthracite in cars at Bridges: Grate, \$5.25 per gross ton; egg, stove and nut, \$5.50 per gross ton; pea, \$3.75 per gross ton.

Standard Hocking, soft coal, in cars, f.o.b. at mines: Lump, \$1.60; 3-4 inch, \$1.50; run of mine, \$1.40; nut, \$1; N. P. and S., 75c; coarse slack, 50c; box cars 10 cents per ton additional.

Youghiogheny soft coal in cars, bonded, at the bridges: 11-4 inch, \$2.60; 3-4 inch, \$2.50; mine run, \$2.40; slack, \$1.90.

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL,
Room 3 8 McIntyre Block,
Winnipeg, Nov. 19, 1904.

ALL markets continue bright but firm with the exception of the coil chain market, which has taken a downward turn. We quote:

Barbed wire, 100 lb.	\$2 75
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....No. 2 and larger.....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	2 75
Staples.....	3 25
Oiled annealed wire.....10	2 96
".....11	3 02
".....12	3 10
".....13	3 20
".....14	3 30
".....15	3 45
Annealed wires (uncoiled) roc. less.	
Horseshoes, iron, No. 0 to No. 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 25
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Horsenails, No. 4—1 1/4 in., list price.....	0 48
" 5—2.....	0 32
" 6—2 1/2.....	0 28
" 7—2 1/2.....	0 24
" 8—2 3/8.....	0 22
" 9—2 1/2.....	0 20
" 10—2 1/2.....	0 20
" 11—2 1/2.....	0 20
" 12—2 1/2.....	0 20
" 14—3 1/2.....	0 20

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

Cut Nails—		Wire Nails—	
2d 1 in.....	\$4 00	1 in.....	4 00
3d Fin. 1 1/4 in.....	1 00	1 1/4 in.....	4 00
3d 1 1/4 in.....	3 65	1 1/2 in.....	3 65
4d 1 1/4 in.....	3 40	1 3/4 in.....	3 40
5d 1 1/4 in.....	3 40	1 3/4 in.....	3 40
6d 2 in.....	3 30	2 in.....	3 30
8d 2 1/4 in.....	3 15	2 1/4 in.....	3 15
10d 3 in.....	3 10	3 in.....	3 10
20d 4 in.....	3 05	3 1/2 in.....	3 05
30d 4 1/2 in.....	3 00	4 in.....	3 05
40d 5 in.....	3 00	4 1/2 in.....	3 00
50d 5 1/2 in.....	3 00	5 in.....	3 00
60d 6 in.....	3 00	5 1/2 in.....	3 00

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 65
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100lb.....	8 50
Jessop.....	13 00

GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, Montreal.

Brand Galvanized Sheets

is the brand you should handle unless you want to pay a fancy price for something that will not work any better. Every sheet guaranteed.

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.

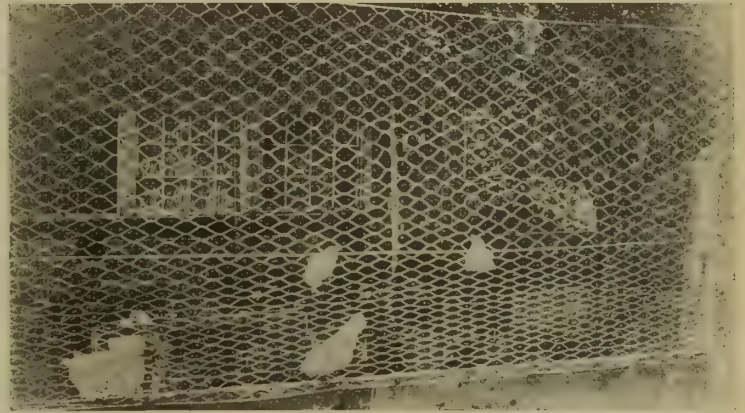
Page "Acme" Poultry Netting

This is the only netting that can be erected without puckers, bags or wrinkles in it. The selvedge wires being of straight smooth wire, the web can be adjusted smoothly and evenly along the edge and centre wires.

Notice that this netting has a large wire running through the centre (except in the 24-inch) which adds much strength to the web and enables it to hold its shape.

With Acme netting no boards at the top are necessary, and posts can be placed long distances apart.

The netting is very close at the bottom, the meshes being only 1 1/4 inch; at the top they are 3 inch. This makes it as effective as netting of 1 1/2-inch mesh throughout, and the cost is much less.



THE PAGE WIRE FENCE CO., Limited

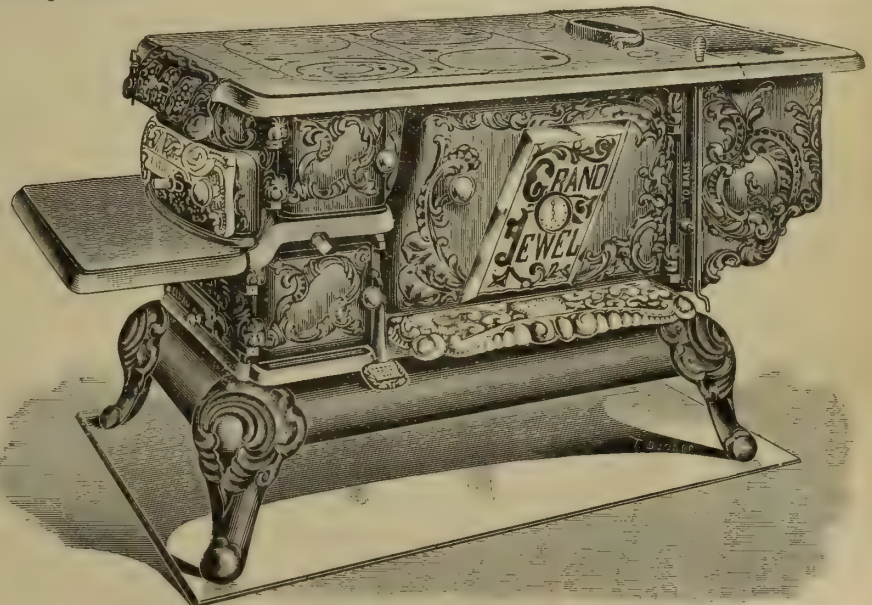
WALKERVILLE

MONTREAL

ST. JOHN

The Grand Jewel Coal Cook Stove

sa new stove of the very highest class, specially adapted for burning Hard or Soft Coal; can also be used or burning Wood



Two Sizes—Square

Duplex Grate of improved pattern. No space left between grate and fire-box linings, so that no ashes or cinders can pass between or accumulate, so as to interfere with its easy working. One movement of the crank cuts out the dead ashes and cinders and drops them into ash pan.

The Duplex Grate when reversed forms a perfect WOOD fire bottom, and with all the coal linings in position 17 inch wood can be used. Special Wood Linings can be supplied to admit wood 24 inches long

Manitoba
Depot

MERRICK, ANDERSON & CO.,

Winnipeg

Two Sizes—with Tank

The Oven is our standard one piece Sheet Steel Oven, same as our Grand Jewel Wood Cook, which has been so wonderfully popular and successful. This Oven will never warp nor crack. With a Steel Oven much less fuel is expended in getting up a baking heat, and less required to keep the stove running.

The Oven is well ventilated.

Oven Door Thermometer.

Water Front for either size supplied when ordered

Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge	3 75
24 gauge	3 90
26 gauge	4 00
gauge	4 10
Galvanized Iron, Apollo, 16 gauge	4 00
18 and 20 gauge	4 00
22 and 24 gauge	4 25
26 gauge English or 28 American	4 25
28 gauge	4 50
30 gauge or 10 1/2 oz.	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	
Queen's Head, 24 gauge	4 25
26 gauge	4 50
28	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	
Genuine Russian, per lb.	11
Imitation	07 to 08
Tinned, 24 gauge, 100 lb	8 00
26 gauge	8 05
Tinplate, 1C charcoal, 20 x 28, box	9 50
IX	11 50
IXX	13 50
Ingot tin	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished	3 75
Sheet zinc, cask lots, 100 lb	7 50
Broken lots	8 00
Pig lead, 100 lb	5 00
Black iron pipe, 1/2 inch	
1/4	
3/4	2 82
1	3 80
Black iron pipe, 1/2 inch	4 20
1	5 25
1 1/4	8 50
1 1/2	10 00
2	14 00
Rope, sisal, 7-16 and larger, basis	10 75
Manila, 7-16 and larger, basis	15 25
Lathyrum	11 25
Solder	20
Axes, chopping	\$ 6 75 to 12 00
" double bits	12 00 to 18 00
Bluestone	5 25
Screws, flat head, iron, bright	.85 and 10 p.c.
Round	80 p.c.
Flat " brass	.75 and 10 p.c.
Round	.70 and 10 p.c.
Coach	70 p.c.
Bolts, carriage, 1/2 or smaller	.60 and 5 p.c.
7-16 and up	55 p.c.
Bolts, machine, 1/2 and under	.55 and 5 p.c.
7-16 and over	55 p.c.
Bolts, tire	.60 and 5 p.c.
Bolt ends	.55 and 5 p.c.
Sleigh shoe bolts	70 p.c.
Machine screws	70 p.c.
Plough bolts	.55 and 5 p.c.
Square nuts, case lots	3c. discount.
small lots	2 1/2 c.
Hex " case lots	3c.
smaller lots	2 1/2 c.
Rivets, iron	.50 and 10 p.c.
Copper, No. 8	82
No. 12	36
Coil chain, 3-16 inch	9 1/4
1/2 inch	7 1/4
5-16 inch	5.20
3/4 inch	4.60
7-16 inch	4.45
1/2 inch	4.30
1/4 and 1/2 inch	4
Spades and shovels	.40 and 5 p.c.
Harvest tools	60 p.c.
Axe handles, turned, s.g. hickory, doz.	\$3 15
No. 1	1 90
No. 2	1 60
Octagon extra	2 30
No. 1	1 60
Files common	70 and 10 p.c.
Diamond	60 p.c.
Building paper:	
Anchor, plain	65c.
tarred	70c.
Pure fibre, plain	67 1/2 c.
tarred	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol	30 p.c.
military	15 p.c.
Ammunition, cartridges, American R.F.	30 p.c.
C.F. pistol	5 p.c.
C.F. military	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black	15 00
chilled, 12 gauge	16 00
soft, 10 gauge	18 00
chilled, 10 gauge	19 00

Shot, Ordinary, per 100 lb	6 00
Chilled	6 55
Powder, F.F., keg	4 70
F.F.G.	5 00
Tinware, pressed, retinned	70 and 10 p.c.
plain	75 and 2 1/2 p.c.
" pieced	
Japanned ware	37 1/2 p.c.
Enamelled ware, white	45 p.c.
Famous	.50 and 10 p.c.
Imperial	.50 and 10 p.c.
Green Wire Cloth	1 55
PETROLEUM.	
Water white American	27 1/2 c.
Prime white American	25 1/2 c.
Water white Canadian	25 1/2 c.
Prime white Canadian	24 1/2 c.

SCRAP.	
No. 1 cast iron	\$14 to 15
No. 2	7
Wrought iron scrap	5
Copper (heavy)	8 1/2 c. per lb.
Yellow brass (heavy)	7 1/2 c.
Light brass	5c. to 6c.
Lead pipe, or tea lead	2c. to 2 1/2 c.
Zinc scrap	1c.

PAINTS, OILS AND GLASS.	
White lead	\$5 00 to \$5 50
Putty in bladder, 2 1/2 lb., in keg of 100 lbs.	0 02 1/2
Turpentine, pure, in barrels	\$ 0 87
Less than barrel lots	0 92
Linseed oil, raw	0 55
Boiled	0 58
Lubricating oils, heavy castor machine	0 29
" extra engine	0 27
" dynamo	0 35
" back	0 22
" cylinder	\$0 50 to 0 75
(as to quality)	
Harness oil	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00 1/2
2nd pressure	1 09 1/2

WINDOW GLASS.	
Single 1st break, up to 25 milled inches, \$3.75; 26 to 40, \$4.00; 41 to 50, \$4.50; 51 to 60, \$5.00; 61 to 70, \$5.00, in 100-ft. boxes.	

CONDITIONS IN BRITISH COLUMBIA.

Vancouver, Nov. 18, 1904.

NO changes are reported in the local price of hardware, glass, oil or paint, although the business for these articles is the best it has ever been. There has been a falling off with the advent of Winter in the trade with the north, but this has been compensated by increased business with interior points. Altogether the Winter prospects for the hardware trade are quite hopeful.

PITTSBURG METAL MARKETS.

From the Iron Trade Review, Nov. 24, 1904.

Pig Iron—Some further advance has been made on nearly all grades of iron, although the buying has been limited. Little iron is available for delivery the remainder of this year and most of the furnaces have a comfortable tonnage on their books for delivery the first quarter. Little Bessemer iron was sold in the week but the minimum price at which it can now be had is \$14.75 at the furnace for any delivery and as high as \$15.25 is asked. No. 2 foundry iron has

sold as high as \$16 in the Valleys and the lowest Pittsburg asking price is \$16.35. Forge iron is strong and scarce at \$14.35 to \$14.50 at the furnace, while basic is held at \$14.25 to \$14.50.

Bessemer, Valley	\$14 75 to \$15 00
Bessemer, Pittsburg	15 60 to 15 85
No. 1 Foundry	16 75 to 17 00
No. 2 Foundry	16 35 to 16 85
Gray forge, Pittsburg	15 10 to 15 35
Chilled basic, Valley	14 25 to 14 50
Chilled basic, Pittsburg	15 10 to 15 35

Steel—The advance in the price of billets and bars has brought out some belated buying for future requirements, but the mills are not anxious to sell too far ahead at these prices and several producers are asking premiums on sheet bars through the first half.

Bars—The buying of steel bars, due to an anticipated advance, has been exceedingly heavy and some of the manufacturers are inclined to cut down requirements as they believe that considerable buying is speculative. An informal meeting of the steel bar manufacturers was held in New York last week and another meeting will be held shortly when it is believed that an advance of \$1 or \$2 a ton will be made. Another advance in iron bars amounting to \$2 has been made, the leading producers now quoting 1.54 3-4c, Pittsburg.

Wire and Wire Nails—A uniform advance of \$2 a ton was made last week on all wire products and the cut nail manufacturers, following the advance on wire nails have marked up quotations \$2 a ton. The buying of wire products since the advance has not been heavy, as all the large jobbers have covered at lower prices.

LONDON METAL MARKET.

From the Metal Market Report, November 16, 1904.

Tin—Spot tin opened steady at £132 7s 6d, futures at £132 5s, and after sales of 450 tons of spot and 320 tons of futures closed firm at £132 12s 6d for spot and £132 7s 6d for futures, making price as compared with yesterday 2s 6d higher on spot and 2s 6d higher on futures.

Copper—Spot copper opened easy at £65 17s 6d, futures at £66 2s 6d, and after sales of 250 tons of spot and 700 tons of futures closed firm at £66 2s 6d for spot and £66 7s 6d for futures, making price as compared with yesterday 2s 6d higher on spot and unchanged on futures.

Lead—The market closed at £13, making price as compared with yesterday unchanged.

NOVA SCOTIA MARKETS.

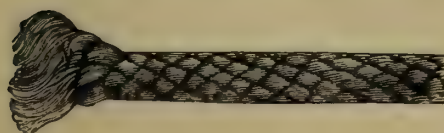
Halifax, Nov. 21, 1904.

TRADER has been normal during the past week. Wholesale houses seem satisfied with the orders they are receiving, although it is now certain that the year's business will not total up to the volume of 1903. Retailers have not been so keen to buy in excess of requirements, and it is believed that stocks generally throughout the province are lighter than a year ago. The reduction in the terms of credit made at the commencement of the year have been well adhered to, and although there was a good deal of complaint and some additional work thrown on business staffs there are few now who would care to go back to the old order of things.



Don't book your order for lanterns until you see our improved **COLD BLAST LANTERN** and get our prices for 1905. **WE LEAD, OTHERS FOLLOW.** **HAMILTON, ONT.**
E. T. WRIGHT & CO.,

Buy the Best.



HERCULES

Sash Cord.

Star Brand Cotton Rope
Star Brand Cotton Clothes Lines
Star Brand Cotton Twine

For Sale by all Wholesale Dealers.

The abandonment of the hardware branch of their business by Black Bros. & Co., Limited, has necessitated some changes on the part of their former travelers. Mr. T. D. Graham, who for the past six years represented this firm in the Annapolis Valley and the eastern part of Nova Scotia, has engaged to travel for Emerson & Fisher of St. John, and his territory will be the Annapolis Valley and the south shore. He is now in St. John getting acquainted with his new lines, and expects to start out on the road as soon after the holidays as practicable. Mr. Graham has had fourteen years experience in hardware, six of which were spent upon the road. James Simmonds & Co., Dartmouth, are open to engage an additional traveler from the first of January.

William Robertson & Son have recently made some changes in their office arrangements that are regarded as improvements. This firm up to the first of the year carried on a retail branch which monopolized the best part of the space on the ground floor. They have now cleared out the retail stock and are using the space for other purposes. An office has been partitioned off for the buyer to the right of the main entrance and adjoining the general and private offices of the firm, and this is now occupied by their buyer, Mr. Whiston, who formerly had his office in an upper storey of the building.

The Commercial Travelers' Association, of which W. B. Arthur, of W. B. Arthur & Co., is president, will this year make the experiment of holding its annual meeting and dinner in St. John, instead of Halifax. All the previous meetings have been held in this city, but Mr. Arthur believes that New Brunswick should receive consideration, and so a change is being made. The date has been set for December 22, in the Royal Hotel, but there is a possibility that it may be postponed to a date between Christmas and New Years to make it more convenient for Nova Scotia travelers to attend. Out of a membership of about 600 there are 240 who reside in New Brunswick, and yet during the past 20 years there has not been a single meeting held in that province.

High prices are still obtained for cod-fish, but the price of herrings has declined owing to the increased supply of the latter fish. The lobster season on the western shore opens in about two weeks, and the fishermen have their preparations well advanced. There has been a good deal of controversy this season over the cordage question, and some fishermen have been getting in supplies of American rope, which they claim to have obtained at a better price than the Canadian article.

Poor Horse Nails

are like poor eggs—a poor investment on the part of the buyer. Better pay a little more for both, and get the best. The recollection of the quality will remain long after the price has been forgotten.

If you want the best of anything, you must be prepared to pay the best price. Don't fool yourself by thinking there are any philanthropic manufacturers of horse nails in this dear Canada of ours, much less in the land of Uncle Sam, who are worrying themselves to provide you with a dollar's worth of horse nails for seventy-five cents. Not a bit of it! You get what you pay for and no more. Rest assured of one thing; that when you buy the "C" brand horse nails, you are getting the best of everything all the way through; made from the best material obtainable in the world, by the best process, the best known brand, the best and easiest to sell, and "made in Canada."

To sum up the whole matter in a nutshell; we want your orders for "C" brand horse nails, directly or indirectly. Don't accept any substitute brands for ours, especially at the same price.

We shall send any merchant free samples for distribution to his farrier customers, or direct to them if preferred, on request to us.

Canada Horse Nail Company

MONTREAL

Established 1865.

PAINT, OIL AND BRUSH TRADES

The Ready Mixed Paint Question.

NO doubt the sale of cheap ready mixed paints has prejudiced the minds of the public against prepared paint of all kind, but this prejudice is unreasoning. The paint buyer who expects to get a satisfactory article at less than the cost of manufacture is doomed to disappointment and has no one but himself to blame for it. Let him pay as much for his ready-to-use paint as he would have to pay for his lead, oil, etc., if he were to do the mixing himself, and he will have better results with much less labor. The strictly high grade \$1.50 mixed paint is far superior to any product of the ordinary painters' mixing stick and elbow grease. There are good reasons for this which ought to be self-evident to anyone who is at all familiar with the paint business.

In the first place, the paint manufacturer buys his materials in ton or car-load lots and not by the keg. There is a wide variation in the prices of these materials when bought in great quantities or in small lots. This difference is enough to make up a substantial margin of profit to the manufacturer, to say nothing of his superior facilities for paint making, which are an advantage to consumer as well as manufacturer. In other words, the paint is of better quality by reason of more thorough and scientific mixing, and can be produced so much more cheaply by modern machinery than by hand that it is worth more, dollar for dollar, than the home-made variety. These are facts that every painter will concede and the only excuse he can find for clinging to the old-fashioned method of mixing his own paints is that at some time someone somewhere has bought an unsatisfactory or worthless "mixed paint," which has discredited in his mind everything of similar name on the market.

A practical method of disposing of the argument so often adduced by the painter—that his hand-mixed paint will cover more and last longer, etc.—is to put him to the test by the application of the goods side by side. But such a test, though conclusive, ought not to be necessary. It is evident to all thinking per-

sons that the paint manufacturer who has a reputation to sustain can and does make a paint that will cover more surface because more thoroughly mixed and more finely ground than paints prepared by hand. Also they will wear longer, because the oil and pigment are so thoroughly incorporated by the mixing and grinding that they hold together better and make a more solid surface than it is possible to obtain by paints mixed by hand. They will look better, because the color is clearer and cleaner and has a better, more lasting gloss than paint mixed by hand. They are more economical, because a given quantity will cover a greater surface than hand made paints. These are not new arguments but they are worthy of reiteration. They lead up to the conclusion that there is no more reason for a painter to mix his own paints than to make his own clothes.—Paint, Oil and Drug Review.

Electricity in Glass Making.

ONE of the earliest electric furnaces for glass making was patented in Germany in 1882. It was of the resistance type, and consisted essentially of a carbon crucible, open at the base, and lined internally with a net or bag of platinum wire. The raw material was fed into this, and having been fused by the heat developed in the carbon walls, dripped through into refining vessels placed underneath.

A later German furnace is a combination of the arc and resistance principles of electric heating. The furnace consists of three parts, the upper portion being utilized as an arc furnace for melting the raw materials, and the intermediate part as a resistance furnace for a species of refining process which the molten mass subsequently undergoes before it finally overflows into a lower receptacle or trough.—Paint, Oil and Drug Review.



You can buy paint for less money than you can buy Hollywood Paint, but when your customers count the labor of putting it on, it would be dear paint in comparison to Hollywood if they got it for nothing.

Hollywood wears on the job, not off it.

In Paste, Ready Mixed and Floor.

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED,

WITHOUT A COMPETITOR IN MERIT
OR RIVAL IN POPULARITY

CAN BE TRULY SAID OF

BOECKH'S BAMBOO-HANDLED CURLING BROOMS



They are made of specially selected corn—well fastened, neat and light.

Do you supply your local rink?

If not no doubt you do not stock this now seasonable line.

Order now, as "The Roarin' Game" will soon be in full swing.

United Factories, Limited,

Head Office: TORONTO.

BRANCHES:
MONTREAL
LONDON

If You Buy

Varnishes

Paints

Japans

Colors

Lacquers

Glues

Stains

Bronzes

Fillers

Chamois

Sponges

WRITE TO

R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.

Hard work never hurts anyone, and why not work when every effort brings good results?

So far as we are concerned, we find genuine pleasure in stretching every muscle to serve our Linseed Oil Customers as they never have been served by any other firm in the past.

OUR PURE LINSEED OIL

is a winner from the word go. Perfect in body, durability and firmness. Get it and see results.

The Dominion Linseed Oil Co.

Limited

HEAD OFFICE: 34 YONGE ST., TORONTO.

FACTORIES: BADEN, ELORA, GUELPH, OWEN SOUND, ONT.
and 31 Mill Street, MONTREAL, QUE.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Nov. 25, 1904.

THE near approach of the close of navigation has kept manufacturers busy filling orders for boat shipment. Staple goods are moving well and prices are being steadily maintained, although there is a weakness in the turpentine market and a slight local weakness in the boiled oil market. The demand for putty this Fall has been exceptionally large. The scarcity of bladders owing to the strike in the packing houses has caused great difficulty in meeting the demand for this special line. General lines have been in good demand. We quote:

Turpentine—Single barrels, 79 1-2c per gallon; 2 to 4 barrels, 78 1-2c gallon. For smaller quantities than barrels 5c extra per gallon is charged. Standard gallon is 8.6 lbs. The above prices are net thirty days, for longer terms prices are higher.

Linseed Oil—Raw, 1 to 4 barrels, 43 to 44c; 5 to 9 barrels, 42 to 43c; boiled, 1 to 4 barrels, 43 to 47c; 5 to 9 barrels, 45 to 46c; delivered in Ontario between Montreal and Oshawa at 2c per gallon in advance.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2 \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1. 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Shellac Varnish—Pure white, \$2.80

to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Nov. 25, 1904.

THE paint and oil market is quiet as usual at this season, pending the opening of Winter. At present no lead is booking for 1905, and trade is quiet. Considerable diversity of opinion prevails in regard to prices and certain firms claim that quotations should be advanced 25c per 100 lbs, and that it is a difficult matter to give quotations at all at the present time. There is, however, lead to be bought at quotations given below. The trade will not be surprised to hear of an advance within the next few months in view of probable tariff changes. Linseed oil is higher in England and as the Canadian market is in close sympathy an advance locally would not occasion much surprise. Turpentine continues unchanged.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in

packages of 25 lbs. and upwards: 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.,

Red Lead—Genuine in casks of 560 lbs., \$4.25; ditto, in kegs of 100 lbs., \$4.50; No. 1, in casks of 560 lbs., \$3.75 to \$4; ditto, in kegs of 100 lbs., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$3 to \$3.10; white, \$3.10 to \$3.20 per gallon; No. 1 (orange), \$2.50.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 45c; boiled 48c; 5 to 9 bbls, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 77c; 2 to 4 bbls, 76c, Toronto; 5 bbls and over, f.o.b. point of shipment, net 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb.; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Ordinary, bladders in barrels,

FIRE AND WATER

In April last destroyed our factory, office-building and all our records of business done in the past, except a few books of account we had in the safe.

About all we had left was **energy**, and a small bank account, with full knowledge of how to make **Church's Cold Water**

ALABASTINE

the Permanent Wall-Coating, that hardens with age, is extensively advertised and in demand everywhere. It sells on its own merits.

We have rebuilt. Everything is new and up-to-date. All dealers coming our way are invited to call and look us over. Expect that only a small proportion of our patrons can do this, but there is nothing to prevent giving your order for goods in our line when called upon by our own or the jobbers' travellers. Stock up early to ensure having goods on hand when the season opens.

The Alabastine Co., Limited, Paris, Ont.



REASON comes from service—growth also. We have tried with all our might to serve the Paint, Oil and Varnish trade in Canada dead right. We have grown some every year—you should see our plant for evidence.

New Era Prepared House Paints

have done their part in contributing to our progress. You sell them? Send for our catalogue for list of specialties.

STANDARD PAINT & VARNISH CO., Limited, WINDSOR, CANADA

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

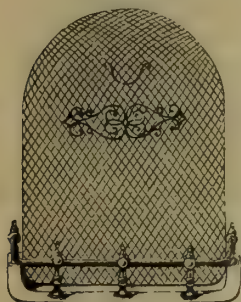
R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



Wire Spark Guards

Polished Brass and Enamelled

Catalogue on request

DENNIS WIRE & IRON CO., LONDON, ONT.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

Established 181

ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.,



Agents for Canada: **A. Ramsay & Son Company, Montreal**

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works or from the principal Color Dealers in Canada



"ISLAND CITY" GOLD PAINT

should be given a fair trial.

We have every confidence in the result.

It is just the thing for holiday trade.

P. D. DODS & CO., Montreal  **Toronto**  **Vancouver**

PUTTY

PUTTY

PUTTY

PUTTY

William Hill, the well-known Wholesale Paint and Color Merchant, St. James Street, Montreal, has received the following letter from one of his customers:

"We received the Putty that we ordered from you and we want to tell you that it is the best PUTTY we have ever used. It is nice and soft and requires no mixing. When we repeat our order be sure and send us the same kind."

This PUTTY and more of the same kind is made by

THE
CANADA
PAINT
COMPANY,
LIMITED

MONTREAL and TORONTO.

\$1.65; pure linseed oil, \$2 to \$2.10; bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2c per lb. and 8 1-2 for single tins.

Window Glass.

QUEBEC.

There is little change in the glass market from the conditions mentioned a week ago. As the time passes the near approach of a scarcity in Belgian glass becomes more apparent. Why no advance in price has taken place is best known to the dealers, but as mentioned in this column before, some glass jobbers are satisfied to run off what stock they have at old prices and handle no more for this season at least. There is some glass on the ocean at present, but it will arrive at considerably advanced freight rates and there is no doubt whatever but that it will be offered at considerably higher price than at present prevails. Our quotations are as follows: First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent. discount 30 days.

TORONTO.

The situation in window glass continues firm from last week with reported scarcity. For quotations see Ontario prices current.

PETROLEUM.

Refined—The market is steady, accompanied with a good demand. Prices have declined 1-2c. We quote: Refined Canadian water white 17 1-2c; Canadian prime white, 16c; American water white, 18c, ex warehouse.

Crude—Market is steady. Prices continue unchanged. Our quotations are as follows: Pennsylvania, \$1.60; Corning, \$1.37; Newcastle, \$1.47; North Lima, \$1.07; Tiona, \$1.75; South Lima, \$1.02; Whitehouse, \$1.01; Somerset, \$1.01; Indiana, \$1.02; Canadian, \$1.53.

Turpentine in New York.

Business in the market for spirits turpentine continues quiet, buyers generally being reported as showing only indifferent interest and as confining their takings to such supplies as are needed to cover current wants. The price at which dealers have held their spot supplies for the last few days is 54c for machines in yard, but some of the trade are inclined to the opinion that with a bid in hand of 53 3-4c for machines in yard supplies are purchasable. Arrivals, it is understood, can probably be bought on bids of 53 1-2c for machines.

Petroleum Production in 1903.

THE total production of crude petroleum in the United States in 1903 was 100,471,337 barrels, a gain of 11,694,421 barrels, or 13.17 per cent. over the production of 1902, according to the report of F. H. Oliphant to the United States Geological Survey. The great increase was mainly due to the remarkable output in California, which is now larger than that of any other state. California produced 24.27 per cent., or nearly one-fourth of the entire production.

Next to California the largest gain in production was in Indiana, which was 1,705,515 barrels, an amount that represents a gain of 22.80 per cent. over the state's production in 1902. Kansas showed a remarkable gain in production—600,465 barrels, or 181 per cent., Kentucky and Louisiana showed gains of about 369,000 barrels each; Indian Territory gained 101,811 barrels, or 274 per cent., and New York gained 43,428 barrels, or 3.86 per cent.

On the other hand there was a slight decrease of production, 128,086 barrels, or 0.708 per cent. in Texas; and Ohio, Pennsylvania, and West Virginia all showed decreased production, amounting to a total of 1,856,619 barrels, or 3.98 per cent., in 1903, as compared with 1902.—Paint, Oil & Drug Review.

Window and Interior Displays

Timely Hints
and Suggestions

Show Cards and Price Tickets.

BY far the most common cause of the disagreement among window dressers as to the use of show cards and price tickets, is the different class of customers dealing at the different stores. One merchant may find that his customers prefer the window that is a display of goods only, while another soon discovers his sales increase when he includes in the window the price of the articles displayed, or a sign drawing attention to them. The grocer who caters to strictly high-class trade has less use for price tickets and almost no place for show cards; but the store which handles popular lines cannot be as successful as it may unless price tickets are in evidence.

The broad statement that the high-class trade are above price, are not interested in price tickets, and that therefore they are out of place, is decidedly erroneous.

No matter what store is making a display of bargain goods, nothing is gained without the price ticket. In windows containing a collection of small articles price cards are valuable, as also where several grades of the same goods are shown. They should not appear with goods that do not seem worth the price asked, however cheap in reality that price may be; neither are they in place among staple goods, the price of which everyone knows.

There are very many who are naturally too timorous to risk asking the price of an article when there is a chance of its being too expensive. Others have the idea that the article which is not ticketed is too high in price. There is no question that many articles of luxury are sold through the price ticket, since if it is not really needed a man will not bother inquiring the price, but it may be the ticket that will convince him he needs the article enough to pay the price asked.

But however valuable a price card may be it should not be used always. A window now or then without a card of any kind will be a pleasant variety.

Much of the value of cards depends upon the neatness with which they are printed, and the style of paper and ornamentation used. Cards with elaborate scrolls and letters are not advisable, straight businesslike cards and lettering

being more artistic, more easily read, and less tiring to the eye. Cards should be of regular shape and the printing not over large. Proportion in size of letter and spacing should be carefully considered.

Show cards should be thoughtfully worded, and all preposterous or slang phrases avoided. The public is not affected by "less than cost," "half price," and such ridiculous wording. Attention should not be drawn to a rival store, nor should show cards be used

This Week's Illustration.

THE novel display shown this week was the work of A. Conn, for W. Conn & Son, Aylmer, Ont., and reveals an ingenuity and idea of effect that should stand Mr. Conn in good stead in the business. The general idea of an automobile is interesting at this time, and the manner in which it is carried out is worthy of the highest praise.

The automobile is built up entirely of hardware. No description could be given that would add much to the picture.



A Striking Arrangement—Shown by W. Conn & Son, Aylmer, Ont.

that are merely funny. Some find little place for show cards in a grocery window, and there certainly are not the opportunities for show cards in a grocery window. A good plan to adopt is to keep a book of phrases so that there is little trouble about the wording. Whether show cards or price tickets, the size, shape, lettering and positions should be constantly altered, so that variety may be obtained.

Every detail is presented with a faithfulness to the general appearance and make-up of an automobile that is surprising considering the material to work on.

The dummy figure lent the whole a naturalness and concealed the rougher parts that must have made up the back.

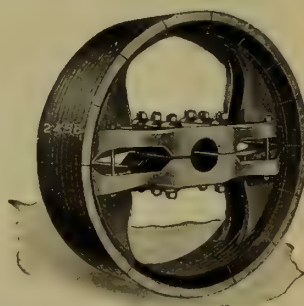
Such displays will do more to increase business than any other single thing, and the trouble taken shows Mr. Conn's interest in progressive retailing.

RETURNED

DEC 14 1904

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MADE IN CANADA



FAIRBANKS WOOD SPLIT PULLEYS

WRITE FOR OUR NEW POWER TRANSMISSION CATALOG

THE FAIRBANKS CO.

MONTREAL TORONTO WINNIPEG VANCOUVER

MACHINERY

THE MACHINERY MARKETS.

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street.

Montreal, Nov. 24, 1904.

ALL indications point to a settled condition rather than a period of briskness or activity. It is not intended to express the idea that there is any depression or even an appearance of it, but there is a feeling that there will be no unusual industrial activity for a few months. At the same time a feeling of steadiness prevails with a marked confidence in future development. The result of the present condition is that manufacturers while not rushed are keeping fairly busy manufacturing for future orders. The stiffness in the metal market has not as yet caused any change in prices. Inquiries are more numerous, but the amount of business transacted in machinery circles has not been of any great volume.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front street east,

Toronto, Nov. 25, 1904.

DURING the past couple of weeks there have been not a few very good orders closed by local dealers throughout Ontario, although there have been no very large deals made. However, it is considered that a very fair amount of business has been transacted, and prospects are held to be good by the local dealers. Inquiries have been coming in very well, especially for woodworking machinery and engines and boilers. Electrical machinery is receiving a good share of attention on the market at the present time, and the prospects are good for a continuation of the steady demand.

McGill Professor Chosen.

When the professorship of mechanical engineering and applied mathematics of the City and Guilds of London became vacant recently the Executive Committee of the institution undertook to find the best man available for the position. They were fortunate in securing E. G. Coker, M.A., D.Sc., of McGill University,

for that position and Dr. Coker leaves shortly to assume his new position, much to the regret of his many friends at McGill.

Machinery and Electrical Notes.

Canadian Electric Light Co., Toronto, are asking for more capital.

New machinery is being installed in the new cement factory at Tod Creek, near Victoria, B. C.

Tenders are being called for wood-working and ironworking machinery for the canal shop at Cornwall, Ont.

Moses & Son, of Carp, Ont., will erect a mill at Farrelton, on the Gatineau River, for the manufacturing of cheese and apple box veneer.

Belmore Bay Gold Mining Co. have ordered plans for a new stamp mill with a capacity for crushing from 20 to 30 tons of ore every 24 hours.

Two new generators, with a capacity of 13,000 horse-power, were added to the power plant at Power Glen, near St. Catharines, on November 14.

The Peterborough Boiler and Radiator Co. will shortly start operations at Peterborough. This firm is to manufacture hot water heaters, boilers and radiators.

The power and light plant at Owen Sound, is being reinforced by the addition of an electric generator imported from Sweden, which has a capacity for lighting six thousand lights.

The new lines of the Montreal Street Railway Co. for Delorimier were operated for the first time on Monday last. The Mayor and leading citizens of the town were invited to take the trip on the first run.

The gas works of the Montreal Gas Co. had a narrow escape from fire recently as the adjacent coal elevator was partially destroyed, but owing to the good work of the firemen further damage was prevented.

The contract for the power house of the new Canada Car Co. works at St. Henry, Que., has recently been let to the Forest City Paving Co., of London, Ont. The contract calls for a complete building, but for none of the installation.

New Westminster, B.C., is to have a new tannery, sawmill and grain elevator. The Fraser River Tannery Co. which was incorporated a short time ago, have secured a site for their large hide curing plant, and it is expected that it will be ready for operation in a few months.

Wm. Martin, vice-president and manager of the Manitoba Gypsum Co., Winnipeg, has let the contract for the building of an additional boat to operate on Lake Manitoba. The company have also taken over the plant of the Munn Mining Co., Gypsumville, which they intend to enlarge and restock with machinery.

A peculiar accident occurred at a fire in Montreal on Sunday last, at the corner of Notre Dame street and Dollard lane, when a transformer on one of the nearby electric light poles burst. The explosion caused fragments to be hurled for a considerable distance, and for a time the work of the firemen was interfered with.

The recent accident to the steamship Catalone on the Longueuil shoal opposite Montreal, was found to be due to the steering gear failing to work promptly. The captain and officers of the ship were acquitted of any blame, but it was decided that the pilot should have exercised more care, knowing that the apparatus was faulty.

The incandescent electric lighting system of the town of Carleton Place was out of order for a fortnight recently, much to the annoyance of the inhabitants of the town. It was caused by the burning out of the armature of one of the generators. Repairs have since been made and the whole system is running in satisfactory order.

There is an unusual situation in the town of Westmount at present regarding electric lighting. Some of the property holders wish to establish a municipal lighting plant in that town and intend to go to the Town Hall and demand a poll of votes in this connection. If this course is adopted by those who are opposed to the proposition a vote will be taken on December 5th, and if no poll were demanded on the 26th the by-law would go into effect by default.

Moulders' Policy.

THE National Founders' Association at their meeting in Cincinnati last week have outlined and agreed upon the following policy in regard to the employment of moulders.

"Inasmuch as certain practices insisted upon by labor organizations tend toward counteracting the energy, ability, inclination and opportunity of moulders to earn greater compensation than they are now receiving, it shall continue to be the policy of the association not to permit the limitation of a man's earning capacity.

"This association reaffirms its determination to prevent the imposition of fine and restrictions placed on a moulder for the purpose of handicapping or retarding him in any way in putting forth his best efforts to produce the best quality and quantity of work in the shortest time, and receiving a proportionate compensation.

"Employees will be paid by the hourly rate, by premium system, piece work or contract, as the employers may elect, and the workmen will be required to give a fair day's work for a fair day's pay.

"It is the privilege of the employee to leave our employ whenever he sees fit and of the employer to discharge any workman when he sees fit.

"The number of apprentices, helpers and handy men to be employed will be determined solely by the employer.

"It shall be the right of the foundrymen to introduce moulding machines and appliances of any kind and to have the same operated by whomsoever he finds to his best advantage to employ thereon.

"Disapproving absolutely of strikes and lockouts, the members of this association will not arbitrate any question with men on a strike. Neither will this association countenance a lockout on any arbitrable question unless arbitration has failed.

"The above principles being absolutely essential to the successful conduct of our business, they are not subject to arbitration.

"In case of disagreement concerning matters not covered by the foregoing announcement, we advise our members to meet their employees either individually or collectively and endeavor to adjust the difficulty on a fair and equitable adjustment, we recommend that the question be submitted to a board of arbitration consisting of two of the employees and two persons en-

gaged in the management of the firm or corporation involved, and in case they fail to reach a satisfactory agreement within seven working days, a fifth member shall be chosen by those four and the majority report of the board so constituted shall be final and binding.

"In order to receive the benefits of arbitration the employees must continue in the service and under the orders of the employer pending a conference and a decision.

"In case any member refuses to comply with this recommendation within thirty days after the dispute arises, he shall be denied the support of the association, unless it shall approve the action of said member.

"Employers shall be free to employ foundry operatives at such wages as may be mutually agreed upon, said rates to be governed by local shop conditions.

"In the operation of piece work, premium plan or contract system, now in force or to be extended in future, this association will not countenance any condition of wages which are not just or which will not allow a workman of average efficiency to earn at least a fair wages."

Water Wheel Installation.

Pelton water wheels are to be installed in a new water power plant about to be built for the purpose of generating energy to light the town of Bridgetown, N.S. The initial equipment will be of 150 horse-power capacity. With the order for the water wheels three thousand feet of steel riveted pipe are also called for.

Labor Decision.

The recent strike at the Canada Foundry Co., Toronto, has given rise to an important case which was decided at Osgoode Hall by Justice Anglin. The cause of the immediate decision was due to the fact that Edward O'Donnell of the Iron Moulders' Union had been arrested on a charge of picketing. He sued the county constable and the company for damages because he was detained in the cell for a number of hours although no warrant had been issued. The case was decided against him and he appealed. The judge not only finds against the man on technical grounds, but lays down a rule that a company asking for police protection cannot be held responsible for all the acts of the police.

CONDENSED MACHINERY ADVERTISEMENTS.**YEARLY CONTRACT RATES.**

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
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MACHINERY WANTED.

Items under this heading inserted free for readers of **HARDWARE AND METAL**

SASH and door clamp to rent or buy. Gold Medal Furniture Co., Toronto.

Thread-cutting lathe—about eighteen inches by eight feet. Box 10, Brown's Corners.

WANTED—Portable saw mill—in good running order; give particulars and price. Box 793, Globe.

WANTED—Second-hand engine lathe; 18-inch swing x 10 ft.; one 3 h.p. gasoline engine. E. A. Prince, 4 Maplewood Place, Toronto.

WANTED—25 hoisting engines—single and double drum; with or without boiler; new or second-hand. Address H. W. Petrie, Toronto.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

TUBULAR BOILERS—A large number of first-class second-hand tubular boilers of all sizes for sale by the Polson Iron Works, Toronto.

FOR SALE OR RENT—Water-power building, 40 x 80, two-storey and basement; also saw mill machinery, lately removed from another building; ready to run. McClellan, Reid & Shaneman, Gananoque, Ont.

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GAS AND GASOLINE ENGINES—None better; write for prices and particulars. Tuerk Iron Works, Berlin.

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ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

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Hand forged from finest steel. Pressed handles, hardened in water.

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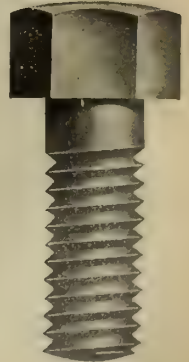
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CALGARY, VANCOUVER, ROSSLAND,**



Door Hangers.

A STEADILY increasing demand for door hangers of the pattern of those manufactured by the Coburn Trolley Track Mfg. Co. (Henry B. Newhall, agent, 9 Murray street, New York) is noted. This firm's elevator door hangers have been installed on all of the sliding gates in the subways of the Interborough Rapid Transit Co., of New York, and the sliding doors in the cars are also equipped with Coburn hangers. The engraving herewith was reproduced from a photograph taken at one of the subway stations.

Coburn hangers of similar construction have been in use several years on the sliding gates of the Brooklyn bridge

New York. The hangers were put in eleven and nine years ago respectively and after having been in constant daily use that length of time, actually work better to-day than they did when new.

An order has just been booked for one hundred and seventy-six sets of "Go-Easy" hangers for use in a large hotel now building, notwithstanding the fact that this style of hanger is somewhat more expensive than the ordinary hanger. These hangers were adopted after an investigation of the various hangers on the market.

The Coburn Trolley Track Mfg. Co. are sending out a four-page circular descriptive of their hangers, which may be had on application.



Sliding Door at Station of New York I. R. T. Co.

terminal and the platform gates at the Grand Central station.

The hangers are roller bearing and of simple construction, so that they cannot get out of order and are made especially for use in connection with iron doors. The hangers may be varied to suit special requirements.

The construction of the track and hangers is such that wear and friction is reduced to a minimum so that the doors can be moved easily even after long service, a fact well attested to by the hangers used on the elevator doors in the buildings of the Home Life Insurance Co., 256 Broadway, and the American Surety Company, 100 Broadway,

Accidents With Emery Wheels.

AMONG other notes on emery wheels the Mechanical Engineer gives some good points on the cause and prevention of accidents with emery wheels. The most common causes of accidents are: 1. Catching of work between the wheel and the rest. 2. Heating and expansion of arbors. 3. Using too small or too light flanges and not having them properly concaved. 4. Not using any flanges but simply screwing a nut against the wheel. 5. Allowing arbors to become loose in the wheel boxes from wear. 6. Running wheels in shaky machines. 7. The injudicious use of the emery wheel dresser.

To avoid as far as possible accidents the following precautions should be taken: 1. Keep all rests well up to the wheel so that nothing can be jammed between them, if a guard be used care must be taken to avoid a similar contingency. 2. All machines should have their speed scheduled, numbers given to the machines, and a record of same kept at the office. 3. All requirements for emery wheels should state the number of the machine on which the wheel is to be used. The list in the office is referred to and if the size of the wheel comes within the proper limits of periphery speed for the particular speed the requisition is passed to the purchasing agent. 4. Light steel guards should, whenever possible, be placed on all machines. 5. All machines should be provided with a substantial rest and run at one speed only. After the wheel is worn down to a certain diameter, it should be transferred to another machine which makes a greater number of revolutions per minute. At the back of each machine a placard should be placed, on which is stated the number of turns per minute and the maximum diameter of wheel which is to be used on it. 6. The emery dresser should be kept under lock and key and one man held responsible for the truth and balance of all wheels.

NINETY TON METEORITE.

One of the largest meteorites ever discovered has just been set up on a pedestal before the Natural History Museum in New York. It was first found in 1896, and has been known as the Peary meteorite. It was conveyed to New York from the north with great difficulty, and at considerable expense. In appearance it resembles a huge copper colored boulder, and is so hard that the knives of visitors fail to make an impression on it. It consists for the most part of iron, with which is associated nickel, cobalt, copper, sulphur, phosphorous and carbon. When the outer covering is removed it takes a polish resembling that of steel.

DEMAND FOR LEATHER.

W. A. MacKinnon, Canadian commercial agent in Bristol, England, calls the attention of the trade to the large demand for leather in Great Britain, which might be supplied from Canada. Large British importers secure the bulk of their supplies from the United States via Boston and Liverpool, owing, they claim, to no inferiority of the Canadian article but to the more moderate prices asked by American importers.



'The Fisher Tube Skate'

Is not "Brazed like a Bicycle." Do not be deceived by our imitators or their agents. **INSIST** on having the Fisher Tube Skate; they are fully guaranteed by us, no matter whom you buy them from. We will gladly repair or replace, free of charge, any defective skates of this year's make, upon their being returned to us by the purchaser. The Fisher Tube Skate has been on the market longer, is better made, and there are more of them sold than all the other tube skates put together. Remember the guarantee. Send for Catalogue.

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Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

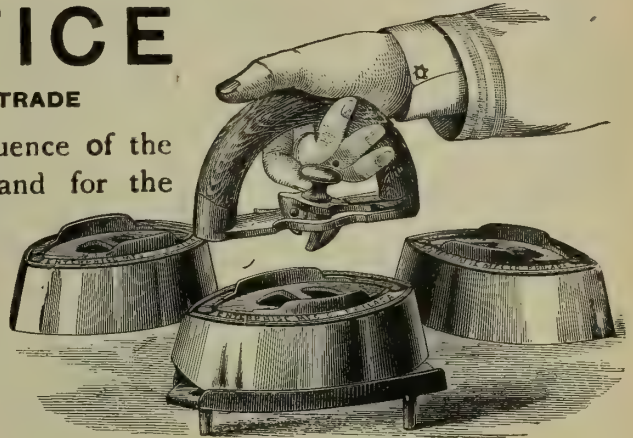
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Sole agents being appointed in each district. Write to-day.

Mrs. Potts Sad Irons
OLD PATTERN

NOTICE

TO THE TRADE

In consequence of the continued demand for the genuine Mrs. Potts Irons, we will accept orders deliverable after Jan'y. 1st next.



Please bear in mind that we use the same grinding machinery as is now being used by the Enterprise Co. of Philadelphia. We claim ours to be the only perfect ground and polished irons on the market.

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Christmas Specialties



Delft Tea Pots

Hand Painted, with Nickel plated Trimmings, Three Sizes.

Delft Tea Pot Stands

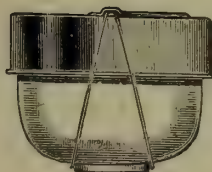
Nickel Plated Trimmings, Two Sizes 6 and 7 inches.

Very Attractive and Fast Moving.

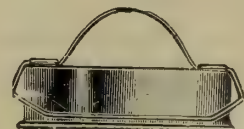
"Queen" Pudding Mould

Covered for Boiling or Steaming, Six Sizes, Nos. 12, 14, 16, 18, 20 and 22.

Needed in every home at this period of the year.



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The best Stove Polish on the Canadian market to-day
Get it from your own jobber.

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**Solarine Bar Polish**

Best and cheapest preparation for polishing:— Brass, Copper, Steel, Tin, Zinc, Bar Fixtures, Kitchen Utensils.

A rapid cleaner expressly designed for all kitchens.

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York Polish**FREE SAMPLE**

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ANGLO-CANADIAN SUPPLY COMPANY,

29 CHURCH ST. :: TORONTO.

Oakey's The original and only Genuine Preparation for Cleaning Cutlery. 6d. and 1s. Canisters

'WELLINGTON' KNIFE POLISH

JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

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STOVES AND TINWARE.**Nickel.**

NICKEL is a metal which occurs rather sparingly in nature, and in but few localities, being usually associated with cobalt, says the Decorators' Gazette and Plumbers' Review, of London. Native or metallic nickel is found at Westerwald, in the Erzgebirge. In Bohemia it is found combined with arsenic in the mineral known under the significant name of kupfernickel; in union with cobalt, iron and copper as arsenic nickel, in the Harz, and at Reichelsdorf in Hesse. It occurs as an oxide in nickelschwartz, as a sulphide in kharhoes, as a sulphide and arseniate of nickel in nickelglanze and with sulphur and antimony in nickelspeiss glanzers at Siegen. Nickel is always present in meteoric stones. Kupfernickel occurs in numerous forms or shapes, as reniform, globular, botroidal, arborescent, massive and disseminated; its fracture is coarse or fine grained, and it has a metallic lustre; its color is usually copper red, occasionally brown and grey, and it occurs in silver and cobalt veins, in gneiss, sienite, mica-slate, kupfer schiefer, accompanied by speiss, cobalt, native silver, quartz, etc. It is found in Westphalia, near Olpe; in Hesse at Reichelsdorf, and Biber in Baden; in the Saxon Erzgebirge, near Saalfeld; in Steyermark, near Schladming, in Hungary; France and England.

Since the manufacture of German silver and the nickel plating of iron and other metals became of so much commercial importance, the extraction of nickel has been undertaken upon a considerable scale. The cobalt ores are its most fruitful sources and they are chiefly treated by the method of Wohler to effect the separation of the two metals. The arsenic they contain is expelled by roasting the powdered speiss first by itself, next with the addition of some charcoal powder, till the gallic odor due to the arsenic is no longer perceptible.

The residuum is then mixed with three parts of sulphur and one of potash, melted in a crucible with a gentle heat, and the product, being lixiviated with water, leaves a powder of metallic lustre, which is a sulphide of nickel free from arsenic, while the arsenic associ-

ated with the sulphur and combined with the resulting sulphide of potassium passes into solution. Should any arsenic still be found in the sulphide, as may happen if the first roasting heat was too great, the above process must be repeated. The sulphide is then finally washed and dissolved in concentrated sulphuric acid, with the addition of a little nitric acid. The metal is precipitated by adding carbonate of soda, and the precipitated carbonate reduced with charcoal.

Rust in Stove Pipes.

A writer in the Scientific American claims that the rusting of stove pipes connected with stoves burning anthracite coal is not due to the sulphur in the coal so much as to the production of ammonia compounds during combustion. Both the chloride and sulphate of sal-ammoniac are formed in the pipe and mix with the ashes and soot. During the dry cold weather it remains harmless, but readily absorbs moisture by contact with damp air as warm weather comes on, when its destructive action begins.

The Cost of Gas Fuel.

A WRITER in Building News says: "It may be taken that a gas cooking stove using gas at 75c. per 3,000 cubic feet and a kitchen range with coal at \$4 per ton are about on a par as to cost. It is, however, very different with gas fires. With these the price of gas should be fully 20 per cent less than in the case of cookers, otherwise the cost is much too high to allow of their general adoption. The sale of gas for the purpose of heat and power was never cultivated, but was rather held back by the majority of our gas authorities until competition began to face them in the shape of electric light. The wedding together of the businesses, that of 'lighting' and that of 'heating and power', was simply a 'marriage of convenience' and though some gas authorities claim that the price of gas should be the same to all consumers, I am not at one with them in this contention, and consider that, like all marriages of convenience, this one (light and fuel) will come to an end, unless more favor is shown to the fuel. Though the gas sold in each case is exactly similar, the cost of that which is sold for heat and power is certainly considerably less than that which is used for lighting.'

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"The Range that Never Fails."

If you are on the still hunt for a Range in which you can place implicit confidence; which you will have little trouble in disposing of to good advantage; and which will give you lots of free advertising every day it is in use, then become acquainted with our Grand Idea.

We have convinced many dealers that we make as good a range as it is possible to manufacture. Our plant is one of the most modern in Canada; our workmen are all experts; and the materials used in the construction of our ranges are the best obtainable.

It has been proven beyond a doubt, by the many unsolicited testimonials received from our numerous patrons, that the **Grand Idea Range** is a **Trade Winner**; that it is a range which you can truthfully recommend to your customers, and in no case be in doubt as to the results which will follow.

We are in a position to fill orders promptly, and shall be pleased to forward descriptive literature upon request.

GUELPH FOUNDRY CO., LIMITED
GUELPH, Ont.

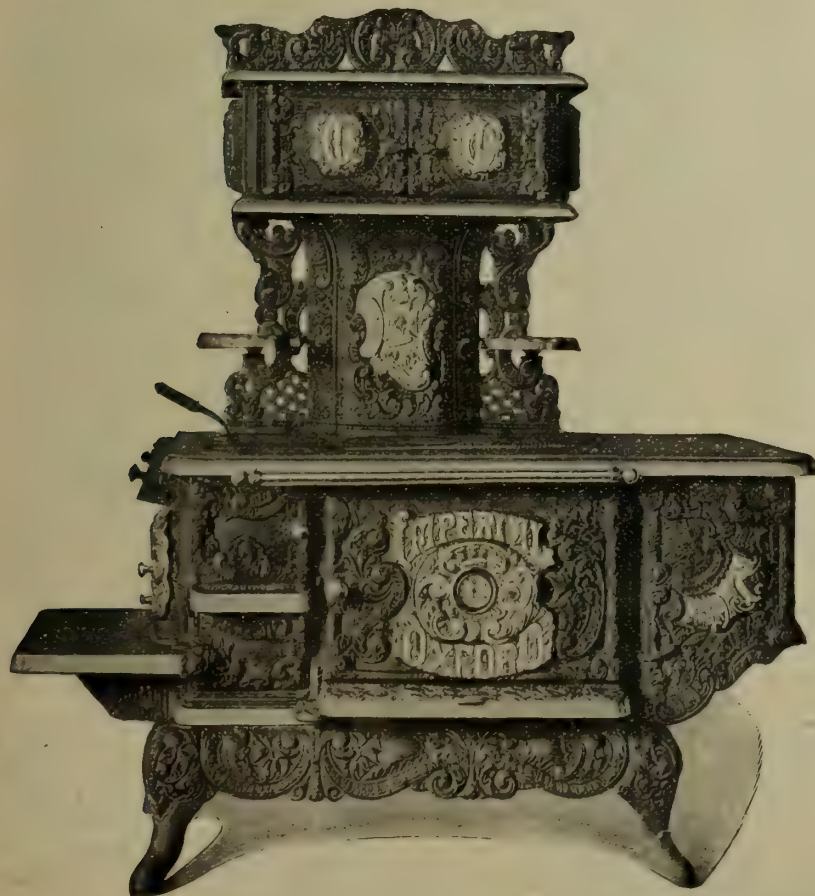
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And you will find it adds to your reputation for selling the best that can be had. Write us about the agency for your district.

The Gurney Foundry Co., Limited,
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CALGARY, ALTA.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE electric light company of Wallaceburg has been re-organized, and will now be known as the Wallaceburg Electric Light and Power Co.

The last edition of the Canada Gazette publishes notice of the formation of a million dollar milling company, with headquarters in Ottawa. The incorporators are: D. C. Cameron, lumberman, of Winnipeg; A. Carmichael, Rat Portage; H. S. Dowd, Quyon; J. A. Cameron, Dominionville; J. D. Flavell, Lindsay.

A meeting of the directors and shareholders of the Cape Breton Coal & Iron Co. was held at Sydney. The principal item of business transacted was the transfer of the bonds of the company from the Guardian Trust Co., of New York, to the Royal Trust Co., of Montreal. The business of the company will hereafter be done in Canada instead of New York.

The Canadian Pacific Railway Atlantic Steamship line and the railway have closed a contract for the transportation of thousands of tons of speigel from Liverpool to Sault Ste. Marie, which is the first contract of its kind made by a Canadian company. The contract was brought about by the Algoma Steel Co. purchasing 10,000 tons of English speigel to be used in the manufacture of pig iron at the steel rail mill.

The report issued by the directors of the Hall Mining and Smelting Co., Nelson, B. C., for year ending June 30 last, shows a vast improvement over previous year. A gross profit was earned on mine account of £1,042, and on smelter account of £8,394. This compares with £729 and £1,694 respectively last year, which shows a net profit of £6,258, comparing with a loss last year amounting to £857. The value of metal and bullion produced this year amounted to £216,000, as compared with £148,000 last year, showing an increase of £68,000.

The total mineral productions of the year in the Province of Ontario amounted to \$12,870,593, and the wages paid to \$4,222,386. Of this total \$7,628,018 was in the non-metallic class, and \$5,242,575 in the metallic. The total production of gold was 10,383

ounces, valued at \$188,036, giving employment to 493 persons, who received in wages \$245,490. The total production of silver was 16,688 ounces, valued at \$8,949, and the wages paid amounted to \$8,000. The amount of pig lead mined was 25 tons, valued at \$1,500, at a cost of \$5,189. Copper and nickel mined had a combined value of \$3,215,794, the wages paid aggregating \$872,302. In the non-metallic class a good showing is made by petroleum and cement. The wages paid for the production of petroleum amounted to \$165,700, while the value of the product was \$1,586,674. The output of cement amounted to 2,572,088 hundredweight, valued at \$901,063, upon which the wages paid amounted to \$271,004.

NOTES.

The City of St. Thomas has bought the local gas plant of that city for \$196,000.

Captain French, of Vancouver, is building a tug for towing logs which will be the biggest on the Canadian Pacific coast. It will be 157 feet long and cost \$56,000.

It is rumored that Hon. Andrew G. Blair, once chairman of the railway commission, is about to accept the post of president and manager of the Toronto Roller Bearing Co.

The Pictou Smelting Works, which were erected a few years ago, have been purchased by Halifax capitalists and will be put in condition at an early date for the treatment of copper, gold and other ores.

The Dundas Gas Co. has sold out to the Dominion Natural Gas Co., of Brantford. The new company agrees to furnish the Town of Dundas with natural gas for illuminating purposes at 75c per thousand.

Peter McKenzie, of the firm of Langue-doe & McKenzie, has announced that as a result of the recent discoveries of mineral deposits in the northern part of the Province of Quebec, a company has been formed with a capital of \$100,000 to develop the properties.

The Brockville Lumber Co., Limited, will not commence doing business until the first of January next, when they will take over and conduct the business now being run by the Rathbun Co. The directors are Messrs. V. R. Marshall, W. H. Comstock, S. J. Geash, A. A. Fisher and E. W. Rathbun.

The Barcalo Manufacturing Co., of Buffalo, N. Y., are starting a branch for the manufacture of brass and iron bedsteads in Welland, Ontario, in the property recently vacated by the Frost Wire Fence Co. They are open to purchase some machinery and supplies, and will be glad to correspond with dealers.

COMPANIES INCORPORATED.

Windermere Lumber Co., Windermere; capital, \$20,000.

Barclay Sound Cedar Co., Barclay Sound; capital, \$50,000.

Canada Machinery Co., Point Edward; capital, \$100,000. The directors are: D. Milne, T. Kenny, C. S. Ellis, J. H. Kittermaster, C. MacKenzie, and T. H. Cook, all of Sarnia.

Adams-Burns Co., Fredericton; capital, \$15,000; purpose, to acquire the lumbering business of Adams, Burns & Co. The directors are: J. Flanagan, New York; T. D. Adams, P. J. Burns, and L. M. Burns, all of Bathurst.

Globe Paint and Varnish Co., Toronto; share capital \$40,000; purpose, to manufacture and deal in oils, paints, varnishes and colors. The directors are: J. D. Hawkins, A. Preston and H. Coventry, all of Toronto.

British Type Founders Agency, Toronto; share capital \$25,000; purpose, to manufacture and sell printers' and lithographers' supplies and machines. The directors are: T. H. Sears, A. L. Malone, and A. Mearns, all of Toronto.

Erie Basket Co., Leamington; share capital \$20,000; purpose, to manufacture and deal in building materials, to carry on a general lumber business. The directors are: E. Smith, W. T. Easton, and E. M. Easton, all of Leamington.

East Toronto Brick Co., Toronto; share capital \$40,000; purpose, to manufacture and deal in all kinds of brick, tiles, artificial stone, cement and plaster. The directors are: W. Williamson, T. H. Cooper and E. Coatsworth, all of Toronto.

F. E. Karn Co., Toronto; share capital \$40,000; purpose, to carry on in all its branches the business of a medical and surgical manufacturing and supply company. The directors are: F. E. Karn, M. Karn, and E. M. Sheppard, all of Toronto.

A. McKillop & Sons, West Lorne; share capital \$100,000; purpose, to buy and sell lumber, to manufacture implements, woodwork, and builders' and carpenters' supplies. The directors are: A. McKillop, J. A. McKillop and D. McKillop, all of West Lorne.

Hamilton Storage Co., Hamilton; share capital, \$25,000; purpose, to carry on a business of warehousing, storage and cartage agents. The directors are: G. E. Bristol, A. Turner, J. Somerville, and H. N. Kittson, all of Hamilton, and J. I. Davidson, of Toronto.

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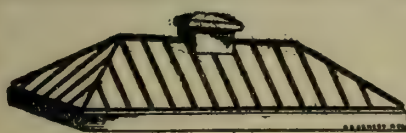
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Sell Our

ALL-METAL ASH SIFTER

—Retails for 25c.—

It sell on sight. Can't come apart. Does its work perfectly. Absurdly low-priced. No other sifters have a reason for existing when ours can be had. Send a big order—or a small one.

C. M. CUTTS & CO., Patentees, Toronto Junction, Ont.

**Pedlar's "Perfect" Metal Lath**

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.

24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
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are many

Ask for our quotations—they will interest you.

JOLIETTE, QUE.

CURRENT MARKET QUOTATIONS.

G. & K.'s Pipe.....	"	....	3 40
Burnell's Pipe.....	each	....	1 00

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.		
Plain or Corrugated.		
2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.		
Canadian, discount 20 to 25 per cent.		

CROSSCUT SAW HANDLES.		
S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.		
Torrey's Rod	per doz.	1 85
Coil, 9 to 11 in.	"	0 95
English	"	2 00

DRAW KNIVES.		
Coach and Wagon, discount 50 per cent.		
Carpenters' discount 60 and 10 per cent.		

DRILLS.		
Hand and Breast.		
Miller's Falls, per doz., net list.		

DRILL BITS.		
Morse, discount 37½ to 40 per cent.		
Standard, discount 50 and 5 to 55 per cent.		

FAUCETS.		
Common; cork-lined, discount 35 per cent.		

EAVETROUGHES.		
10-inch	per 100 ft.	10 00

ELBOWS (stovepipe.)		
5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35
Polished, 15c. per dozen extra.		

ESCUTCHEONS.		
Discount 50 and 10 per cent., new list		

ESCUTCHEON PINS.		
Iron, discount 40 per cent.		

FACTORY MILK CANS.		
Discount off revised list, 40 per cent.		

FILES AND RASPS.		
Great Western	70 and 10 per cent.	
Arcade	70 " 10 "	
Kearney & Foot	70 " 10 "	
Diamond	70 " 10 "	
American	70 " 10 "	
J. Barton Smith	70 " 10 "	
McClellan	70 " 10 "	
Eagle	70 " 10 "	
Nicholson, 60 and 10 to 60, 10 and 5		
Boyal	80 " "	
Globe	70 to 75 " "	
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.		
Jowitt's, English list, 25 to 27½ per cent.		
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50		

GLASS.		
Window.		
Box Price.		
Size United	Per	Per
Inches.	50 ft.	100 ft.
Under 26	3 80	5 06
26 to 40	4 00	5 44
41 to 50	4 50	6 56
51 to 60	4 75	7 50
61 to 70	5 00	8 62
71 to 80	5 30	9 38
81 to 85		10 75
86 to 90		12 30
91 to 95		15 00
96 to 100		18 00

GAUGES.		
Marking, Mortise, Etc.		
Stanley's, discount 50 to 55 per cent.		
Wire Gauges.		
Winn's, Nos. 26 to 33	each	1 65 2 40
GILLET'S POWDERED LYE.		
1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.		

HALTERS.		
Rope, 1-inch	per gross	1 00
Rope, 1 1/2-inch	"	12 00
Rope, 2-inch	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1 1/2-inch	"	5 20
Web	"	2 45

HAMMERS.		
Nail.		
Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.		

Tack.		
Magnetic	per doz.	1 10 1 20
Sledge.		
Canadian	per lb.	0 07½ 0 08½

Ball Peen.		
English and Canadian, per lb.		0 22 0 25

HANDLES.		
Axe, 2nd growth, per doz. net		3 00 4 00
Store door	per doz.	1 00 1 50

Fork.		
C. & B., discount 40 per cent., revised list.		

Hoe.		
C. & B., discount 40 per cent., revised list.		

Saw.		
American	per doz.	1 00 1 25

Plane.		
American	per gross	3 15 3 75

Hammer and Hatchet.		
Canadian, discount 40 per cent.		

HANGERS.		
doz. pairs.		
Steel barn door		8 00 10 00
Stearns, 4-inch		4 50
5-inch		6 00
Zenith		9 00
Lane's covered—		
No. 11, 5-foot run		8 40
No. 11½, 10-foot run		10 80
No. 12, 10-foot run		12 60
No. 14, 15-foot run		21 00
Steel, covered		4 00 11 00
track, 1 x 3-16 in (100 ft)		3 75
1½ x 3-16 in (100 ft)		4 75

HARVEST TOOLS.		
Discount 60 per cent.		

HATCHETS.		
Canadian, discount 40 to 42½ per cent.		
Shingle, Red Ridge 1, per doz.		4 40
2,		4 85
Barrel, Underhill		5 00

HAT ENAMEL.		
Henderson & Potts' "Anchor Brand"		

HINGES.		
Blind, Parker's, discount 60 per cent.		
Heavy T and strap, 4-in., per lb.		0 06½
5-in.,		0 06½
6-in.,		0 06
8-in.,		0 05½
10-in.,		0 05½
Light T and strap, discount 65 and 5 per cent.		
6 to 10 in.	per 100 lb.	4 50
12 in. up.	"	3 25
Spring, No. 20, per gro. pairs		10 50
Spring, Woodyatt pattern, per gro. No. 5.		\$17.50; No. 10, \$18; No. 20, \$10.80; No. 120, \$20; No. 51, \$10; No. 50, \$27.50.

HOES.		
Garden, Mortar, etc., discount 60 per cent.		
Planter	per doz.	4 00 4 50

HOLLOW WARE.		
Tinned case, 35 per cent.		

HOOKS.		
Cast Iron.		
Bird cage	per doz.	0 50 1 10

Clothes line, No. 61	0 00 0 70
Harness	0 60 12 00
Hat and coat	per gro. 1 10 10 00
Chandelier	per doz. 0 50 1 00

Wrought Iron.		
Wrought hooks and staples Canadian discount 60 per cent.		

Wire.		
Hat and coat, discount 60 per cent.		
Belt	per 1,000	0 60
Screw, bright, discount 60 per cent.		

HORSE NAILS.		
"P.B." Brand, 55 to 60 per cent.		
"C" brand, 40, 10 and 7½ per cent. off list	{ Oval	
"M" brand, 55, per cent.	{ head	
"Monarch", 50 and 7½ per cent.		
"Peerless", 50 per cent. dis.		

HORSESHOES.		
F.O.B. Montreal		
"P.B." brand, new pattern, base	\$3 50	
"M." brand, base	3 65	
Add 15c. Toronto, Hamilton, Guelph.		

JAPANNED WARE.		
50 per cent.		

PICKS.		
Star	per doz.	3 00 3 25

REFILES.		
Brass spun 7½ per cent. discount off new list.		
Copper	per lb.	0 30 0 50
American, 60 and 10 to 65 and 5 per cent.		

KEYS.		
Lock, Canadian dis. 40 to 40 and 10 per cent.		
Cabinet, trunk and padlock,		
American	per gross	0 60

KNOBS.		
Door, japanned and N.P., per		
Bronze, Berlin	per doz.	1 50 2 50
Bronze, Genuine	"	2 75 3 25
Shutter, porcelain, F. & L.		6 00 9 00
screw	per gross	1 30 2 00
White door knobs	per doz.	2 00

HAY KNIVES.		
Net prices.		

LAMP WICKS.		
Discount, 60 per cent.		

LADDERS, EXTENSION.		
Wagoner Extension Ladders, dis. 40 per cent.		

LANTERNS.		
Cold Blast	per doz.	7 00
No. 3, "Wright's"	"	8 50
Ordinary, with O burner	"	4 00
Dashboard, cold blast	"	9 00
No. 0	"	5 75
Japanning, 50c. per doz. extra.		

LEMON SQUEEZERS.		
Porcelain lined	per doz.	2 20 5 60
Galvanized	"	1 87 3 85
King, wood	"	2 75 2 90
King, glass	"	4 00 4 50
All glass	"	0 50 0 90

LAWN MOWERS FOR 1905.		
Woodyatt, 10½-in., 14-in. cut	\$ 8 50 to \$11 00	
Star, 9-in.	6 00 to 6 50	
Daisy, 8-in.	5 25 to 5 75	
Philadelphia, 7½-in.	6 00 to 7 50	
Woodyatt, 10½-in., ball bearing	13 25 to 18 00	
Grass Boxes	1 75 to 2 00	
King Edw'd, 12-in., 14-in. cut	9 00 to 10 00	

Horse Lawn Mowers, "Special."		
Discount, 50 per cent., with freight concessions in quantity shipments.		

Maxwell & Sons:		
10½-in. high wheel	7 50 10 00	
9-in.	5 50 6 25	
8-in.	4 90 5 50	
Discount 50 per cent.		

LOCKS.		
Canadian, 50 to 50 and 10 per cent.		
Russell & Erwin	per doz.	

Cabinet.		
Eagle, discount 30 per cent.		

Padlocks.		
English and Am.	per doz.	0 50 6 00
Eagle, discount 20 to 25 per cent.		

MACHINE SCREWS.		
Iron and Brass.		
Flat head, discount 25 per cent.		
Round head, discount 20 per cent.		

MALLET.		
Tinsmiths'	per doz.	1 25 1 50
Carpenters', hickory,	"	1 25 3 75
Lignum Vitae	"	3 85 5 00
Caulking, each	"	0 60 2 00

MATTOCKS.		
Canadian	per doz.	5 50 6 00

MEAT CUTTERS.		
American, discount 3½ per cent.		
German, 15 per cen		
Gem	each	1 15

MILK CAN TRIMMING.		
Discount 25 per cent.		

NAILS.		
Cut.		
Wire.		
2d	3 30	3 25
3d	2 95	2 90
4 and 5d	2 70	2 65
6 and 7d	2 60	2 55
8 and 9d	2 45	2 40
10 and 12d	2 40	2 35
16 and 20d	2 35	2 30
30, 40, 50 and 60d (base)	2 30	2 25
Cut nails in carlots 5c. less		
Wire nails in carlots are \$2.20 (base).		
Steel cut nails 10c. extra.		
Miscellaneous wire nails, discount 75 per cent.		
Coopers' nails, discount 30 per cent.		

NAIL PULLERS.		
German and American	1 75	2 50

NAIL SETS.		
Square, round and octagon,		
per gross	3 38	
Diamond	1 00	

POULTRY NETTING.		
2-in. Mesh, 19 w.g., dis. 60 per cent.		
2-in. Mesh, 16 w.g. and heavier, 50 p.c.		

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RETURNED

HARDWARE AND METAL

NOV 26 1904

Cut Book by
Page 19

MORE WORK—SAME HELP—SAME TIME

Just a Minute, We'll Tell You How.

By installing our up-to-the-minute Office Labor Saving Systems, pronounced a success by every business house using them. Isn't it reasonable to say they'll be successful with you? Try these and be convinced. Specially adaptable to hardware concerns.

We can devise a system to meet your requirements.

The Office Specialty Mnf. Co., Limited

55 YONGE STREET,
Factories—Newmarket.New premises—almost ready—97-103 Wellington W.,
TORONTO.

NO WASTE TIME HERE.

PLANE IRONS.			
English	per doz.	2 00	5 00
PLIERS AND NIPPERS.			
Button's genuine, per doz. pairs, discount 37½ to 40 per cent.			
Button's imitation	per doz.	5 00	9 00
German	"	0 60	0 60

PRESSED SPIKES.			
Discount 20 per cent.			
PULLEYS.			
Hothouse	per doz.	0 55	1 00
Axle	"	0 22	0 33
Screw	"	0 27	1 00
Awning	"	0 35	2 50

PUMPS.			
Canadian cistern		1 80	3 60
Canadian pitcher spout		1 40	2 10

PUNCHES.			
Saddler's	per doz.	1 00	1 85
Conductor's	"	3 00	15 00
Pinner's, solid	per set		0 72
" hollow	per inch		1 00

RAKES.			
Wood	per doz. net	1 20	up.

RAZORS.			
per doz.			
Elliot's		4 00	18 00
Geo. Butler & Co.'s		4 00	18 00
Boker's		7 50	11 00
" King Cutter		13 50	18 50
Wade & Butcher's		3 60	10 00
Carbo Magnetic			15 00
Griffon Barber's Favorite			13 00
Griffon Safety Razors			13 50
Griffon Stropping Machines			13 50
Lewis Bros. "Klean Kutter"		8 50	10 50
Hindoo		10 50	14 00
Orgsteom's Swedish		3 50	10 00
Clauss, 50 and 10 per cent.			
Clauss Strops, 50 and 10 per cent.			

REGISTERS.			
Discount 40 per cent.			

RIVETS AND BURNS.			
Iron Rivets, black and tinned, 60 and 10 p. c.			
Iron Burns, discount 55 per cent.			
Copper Rivets, with usual proportion burns, 45 per cent.			
Copper Burns only, discount 30 and 10 per cent.			
Extras on Tinned or Coppered Rivets, 1-lb. packages 1c. per lb.; 1-lb. packages 2c. lb.			

RIVET SETS.			
Canadian, discount 35 to 37½ per cent.			

ROPE, ETC.			
Sisal		0 11	
Pure Manila		0 14	
"British" Manila		0 11	
Cotton, 3-16 inch and larger		0 21	0 22
" 5-32 inch		0 25	0 27
" 1 inch		0 25	0 28
Russa Deep Sea		0 16	
Jute		0 09	
Lath Yarn, single		0 10	
" double		0 10	
Sisal bed cord, 48 feet	per doz.	0 65	
" 60 feet	"	0 80	
" 72 feet	"	0 95	

RULES.			
Boxwood, discount 70 per cent.			
Ivory, discount 20 to 25 per cent.			

SAD IRONS.			
Mrs. Potts, No. 55, polished	per set	0 80	
" No. 50, nickel-plated	"	0 90	
Common, plain		4 50	
" plated		5 50	

SAND AND EMERY PAPER.			
B. & A. sand, discount, 40 and 5 per cent			
Emery, discount 40 per cent.			
Carborundum (Rutten's), 5 to 10 per cent. advance on list.			

SAP SPOUTS.			
Bronzed iron with hooks	per 1,000	7 50	
"Eureka" tinned steel, hooks	"	8 00	
SAWS.			
Hand, Diaston's, discount 12½ per cent			
S. & D., discount 40 per cent.			
Crosscut, Diaston's, per foot	0 35	0 55	
S. & D., discount 35 per cent. on Nos. 2 and 3.			
Hack, complete	each	0 75	2 75
" frame only	each	0 50	1 25

SASH WEIGHTS.			
Sectional	per 100 lb.	2 00	2 25
Solid	"	1 50	1 75
SASH CORD.			
Per lb.		0 28	0 30
SAW SETS.			
per doz.			
Lincoln and Whiting		4 75	
Hand Sets, Perfect		4 00	
X-Cut Sets		7 50	

SCALES.			
Gurney Standard, 40 per cent.			
Hurney Champion, 50 per cent.			
Burrow, Stewart & Milne—			
Imperial Standard, discount 40 per cent.			
Weight Beams, discount 35 per cent.			
Champion Scales, discount 50 per cent.			
Fairbanks standard, discount 35 per cent.			
" Dominion, discount 55 per cent.			
" Richelieu, discount 55 per cent.			
Warren's new Standard, discount 40 per cent.			
" Champion, discount 50 per cent.			
" Weightbeams, discount 35 per cent.			

SCREW DRIVERS.			
Sargent's	per doz.	0 65	1 00
SCREEN DOORS.			
Common doors, 2 or 3 panel, walnut stained, 4-in. style	per doz.	6 50	
Common doors, 2 or 3 panel, yellow and green stained, 4-in. style	per doz.	6 75	
Common doors, 2 or 3 panel, in natural colors, oil finish	per doz.	8 75	
3-in. style 20c. per dozen less.			

SCREWS.			
Wood, F. H., bright and steel, discount 87½ per cent.			
Wood, R. H., bright, dis. 82½ per cent.			
" F. H., brass, dis. 80 per cent.			
" R. H., dis. 75 per cent.			
" F. H., bronze, dis. 75 per cent.			
" R. H., dis. 70 per cent.			
Drive Screws, dis. 87½ per cent.			
Bench, wood	per doz.	3 25	4 00
" iron	"	4 25	5 00
Set, case hardened, dis. 60 per cent.			
Square Cap, dis. 50 and 5 per cent.			
Hexagon Cap, dis. 45 per cent.			

SCUTTERS.			
Per doz. net		6 00	9 00
SCYTHE SNATHS.			
Canadian, discount 40 per cent.			

SHEARS.			
Clauss, nickel, discount 80 per cent.			
Clauss, Japan, discount 67½ per cent.			
Clauss, tailors, discount 40 per cent.			
Seymour's, discount 50 and 10 per cent.			

SHOVELS AND SPADES.			
Canadian, discount 45 per cent.			

SINKS.			
Cast iron, 16 x 24		0 85	
" 18 x 30		1 00	
" 18 x 36		1 40	

SNAPS.			
Harness, German, discount 25 per cent.			
Lock, Andrews		4 50	11 50

SOLDERING IRONS.			
1, 1½-lb.	per lb.	0 37	
2-lb. or over	"	0 34	

SQUARES.			
Iron, No. 492	per doz.	1 90	2 25
" No. 493	"	2 40	2 55
" No. 494	"	3 25	3 40
Steel, discount 60 and 5 to 65 per cent.			
Try and Bevel, discount 50 to 52½ per cent.			

STAMPED WARE.			
Plain, discount 75 and 12½ per cent. off revised list.			
Retinned, discount 75 per cent. off revised list.			

STAPLES.			
Galvanized		3 00	
Plain		2 80	
Coopers, discount 45 per cent.			
Poultry netting staples, discount 40 per cent.			
STOCKS AND DIES.			
American discount 25 per cent.			

STONE.			
Washita	per lb.	0 28	0 60
Hindustan	"	0 06	0 07
" slip	"	0 09	0 09
Labrador	"	0 13	0 13
Axe	"	0 15	0 15
Turkey	"	1 50	
Arkansas	"	0 10	
Water-of-Ayr	"	0 10	
Scythe	per gross	3 50	5 00
Grind, 40 to 200 lb., per ton		25 00	
" under 40 lb.		28 00	
" 200 lb. and over		31 00	

STOVEPIPES.			
5 and 6 inch, per 100 lengths		7 00	
7 inch		7 50	

TACKS, BRADS, ETC.			
Carpet tacks, blued		80 and 15	
" tinned		80 and 20	
" (in kegs)		40	
Cut tacks, blued, in dozens only		80	
" 4 weights		60	
Swedes cut tacks, blued and tinned—			
in bulk		80 and 10	
In dozens		75	
Swedes, upholsterers', bulk		85, 12½ and 12½	
" brush, blued and tinned		70	
Swedes, gimps, blued, tinned and			
spanned		75 and 12½	
Zinc tacks		35	
Leather carpet tacks		55	
Copper tacks		50	
Copper nails		52½	
Trunk nails, black		65 and 5	
Trunk nails, tinned		65 and 10	
Clout nails, blued		65 and 5	
Chair nails		35	
Patent brads		40	
Fine finishing		10	
Lining tacks, in papers		15	
" in bulk		15	
" solid heads, in bulk		75	
Saddle nail, in papers		10	
" in bulk		15	
Tufting buttons, 22 line, in dozens only		60	
Zinc glaziers' points		5	
Double pointed tacks, papers		90 and 10	
Clinch and duck rivets		40	
" bulk		45	

TAPE LINES.			
English, ass skin	per doz.	2 75	5 00
English, Patent Leather		5 50	9 75
Chesterman's	each	0 90	2 85
" steel	each	0 80	8 00

TINNERS' SNIPS.			
Per doz.		3 00	15 00
Clauss, discount 35 per cent.			

THERMOMETERS.			
Tin case and dairy, 75 to 75 and 10 per cent.			

TRAPS (steel).			
Game, Newhouse, discount 25 per cent.			
Game, H. & N. F. B. & W., 65 per cent.			
Game, steel, 72½ per cent.			

TROWELS.			
Disston's, discount 10 per cent.			
German	per doz.	4 75	6 00
S. & D., discount 35 per cent.			

TWINES.			
Bag, Russian	per lb.	0 27	
Wrapping, cotton, 3-ply		0 24	
" 4-ply		0 27	
Mattress	per lb.	0 33	0 45
Staging	"	0 27	0 35

VISES.			
Wright's		0 13½	
Brook's		0 12½	
Pipe Vise, Hinge, No. 1		3 50	
" No. 2		5 50	
Saw Vise		4 50	9 00

WROUGHT IRON WARE.			
Blacksmiths' (discount) 60 per cent.			
carroll (discount) 45 per cent.			

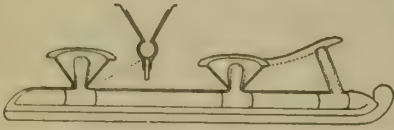
ENAMELLED WARE.			
White, Princess, Turquoise, Blue and White			
discount 50 per cent.			
Diamond, Famous, Premier, discount 50 and 10 per cent.			
Granite or Pearl, Imperial, Crescent, discount 50, 10 and 10 per cent.			
Premier steel ware, 40 per cent.			
"Star" decorated steel and decorated white, 25 per cent.			

WIRE.			
Smooth Steel Wire.			
No. 0-9 gauge.			\$2 25
10		60.	extra.
11		120.	
12		200.	
13		300.	
14		400.	
15		550.	
16		700.	

Add 60c. for coppering and \$2 for tinning.
Extra net per 100 lb.—Oiled wire 10c.,
spring wire \$1.25, special hay baling wire 30c.,
best steel wire 75c., bright soft drawn 15c.,
charcoal (extra quality) \$1.25, packed in casks
or cases 15c., bagging and papering 10c., 50
and 100-lb. bundles 10c., in 25-lb. bundles
15c., in 5 and 10-lb. bundles 25c., in 1-lb.
hanks, 50c., in 1-lb. hanks 75c., in 1-lb.
hanks \$1.

Fine Steel Wire, discount 27½ per cent.
List of extras: In 100-lb. lots: No. 17,
\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—
No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No. 24,
\$8—No. 25, \$9—No. 26, \$9.50—No. 27,
\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—
No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,
\$17. Extras net—tinned wire (No. 35) 17.25,
\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,
5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in
50- and 100-lb. bundles, 25c.—in 1-lb. hanks, 25c.,
in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—
packed in casks or cases, 15c.—bagging or
papering, 10c.

Nott Tube Skates



Will Stand Any Strain

They are 25 per cent. lighter than any other tube skate made, and easily 100 per cent. stronger.

There is not a bit of solder used in their construction

Every part is brazed. The "Lug," which is such an essential part of Nott Tube Skates, is a device which we alone control. It is impossible to pull the heel or toe plate off, as they screw or bolt directly through the flange of the cone to the boot.

Blades are finest quality of tool steel made specially for us, and are so hard that they cannot be filed or nicked by other skates.

SEND FOR CIRCULAR

Better Still, Send For Sample Pair.

W. G. Nott & Co.

Sole Makers

205 1/2 Yonge St. TORONTO

FORTY PER CENT.
PROFIT, ALMOST, IN
Hamilton Rifles

AT \$2.00 AND \$2.50 RETAIL
* (No. 15 sells at \$2.00; No. 19 at \$2.50.)

These rifles compare with those you have been accustomed to at \$5 or \$6. We make them on a new principle. They are not toys, but a genuine firearm, shooting .22 cal. cartridge, long or short, and accurate up to 75 yards. They sell on sight for bird, rabbit, squirrel shooting. Send for circular to us. Order from your Canadian jobber.

The HAMILTON RIFLE CO.,
Dept. 71. PLYMOUTH, MICH.

C.H. HENKELS PHILA.

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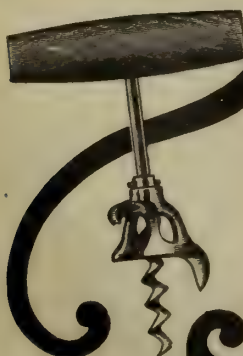
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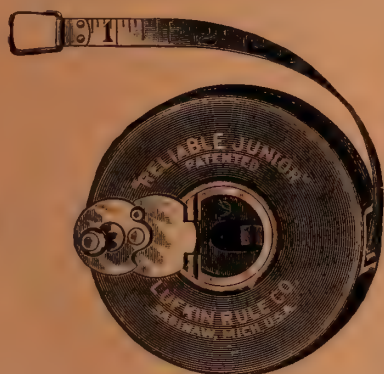


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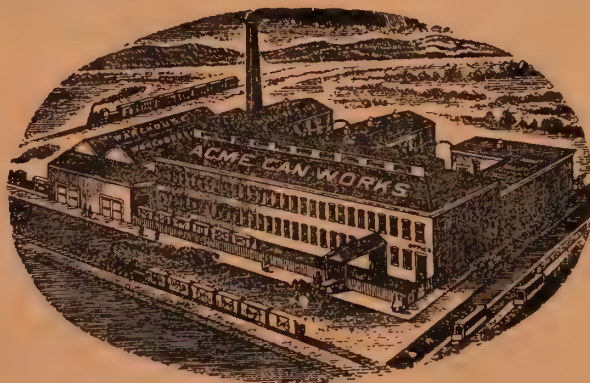
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MONTREAL AND TORONTO, DECEMBER 3, 1904

NO. 49

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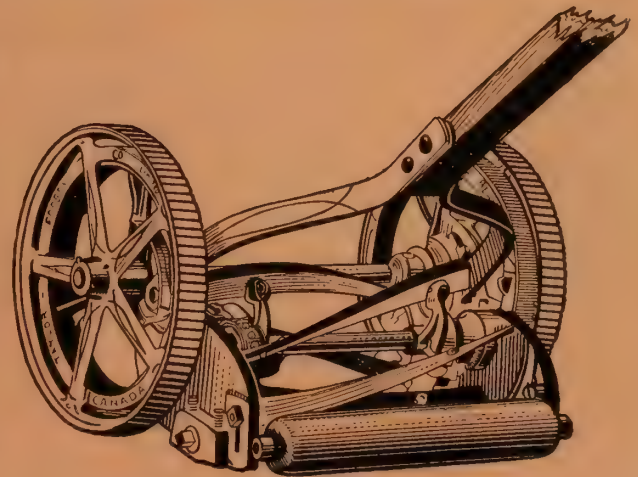
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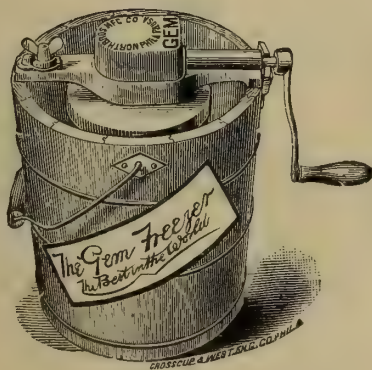
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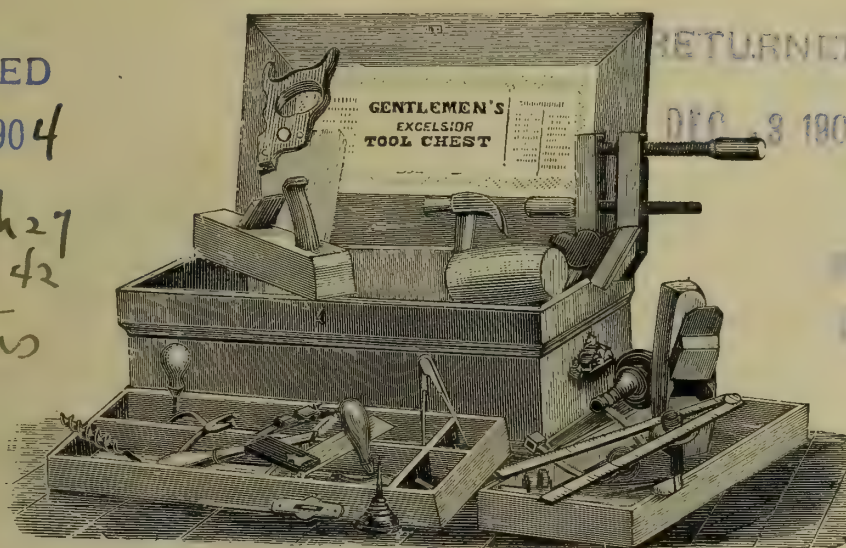
A Reminder

NO person likes to receive a present more than a boy. Few appreciate them as much as he,—given the right present. That's just the reason why, at this season of the year, you should pay particular attention to the juvenile end of your trade. Sons will be given presents by their fathers, and for the industrious lad you should suggest a Set of Tools, a Boy's Axe, or a Hammer and Saw, and for the one who is inclined to be a sport, a Pair of Skates, a Gun, or Rifle. There are hosts of other goods, but our reminder, if taken right, should turn a lot of cash into your till during Christmas week.

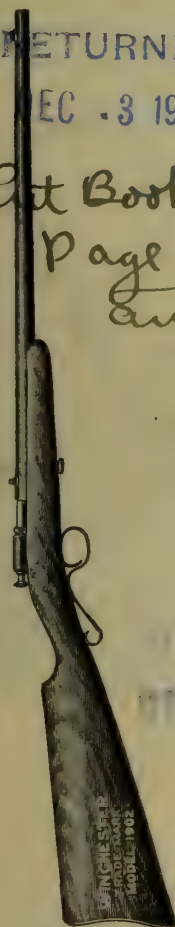
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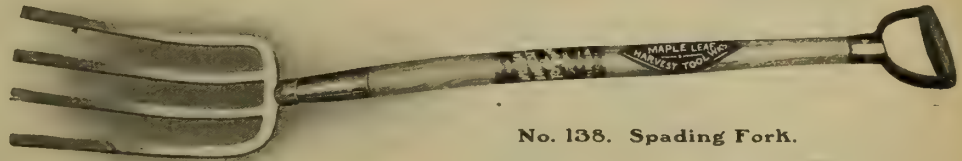
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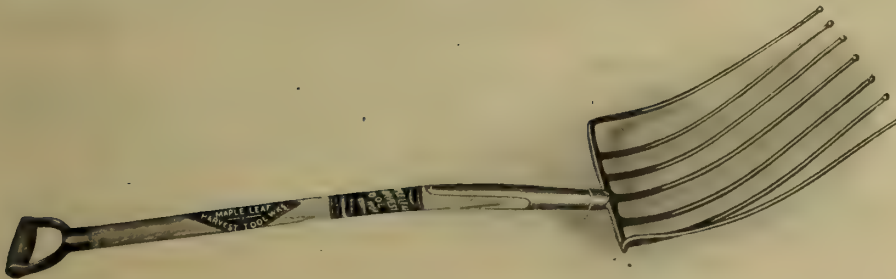
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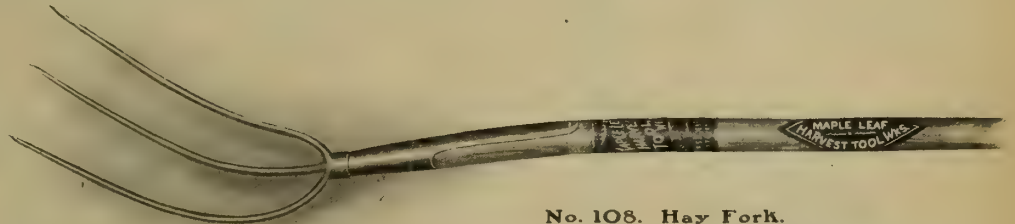
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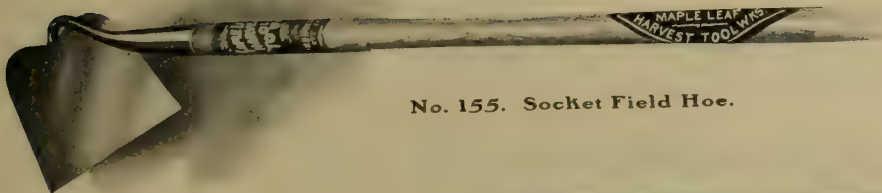
No. 138. Spading Fork.



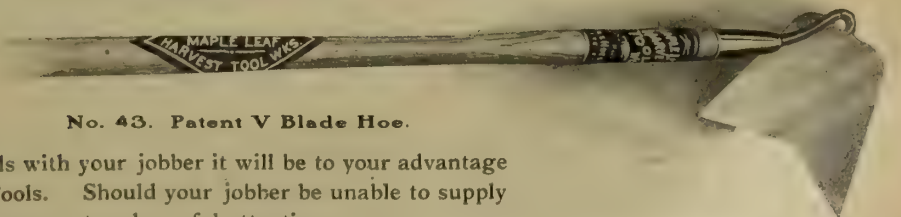
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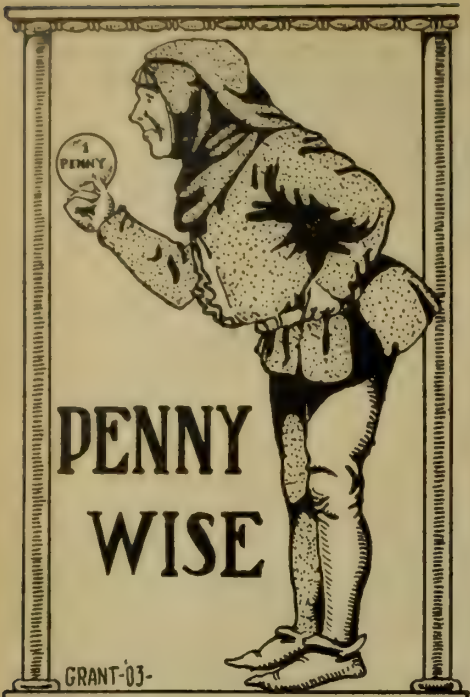


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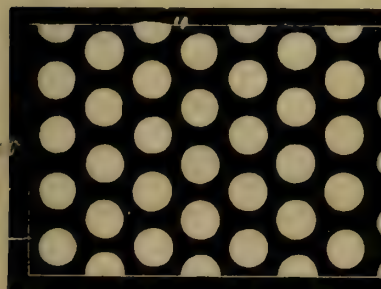
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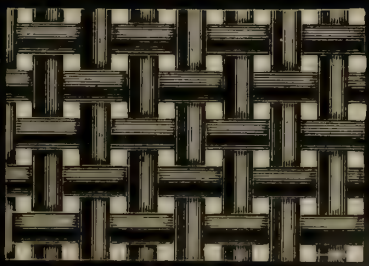
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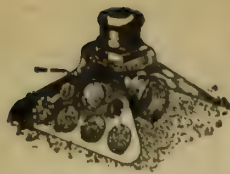
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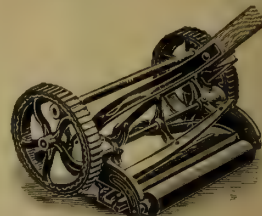
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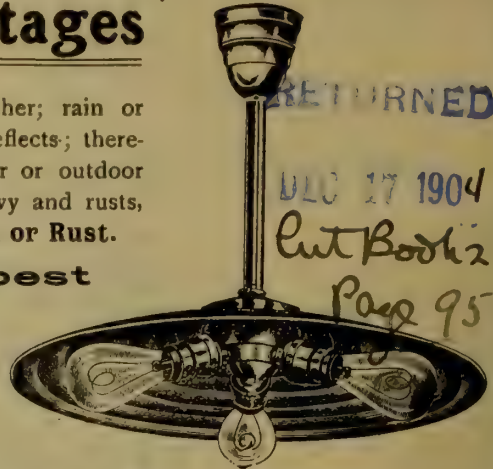
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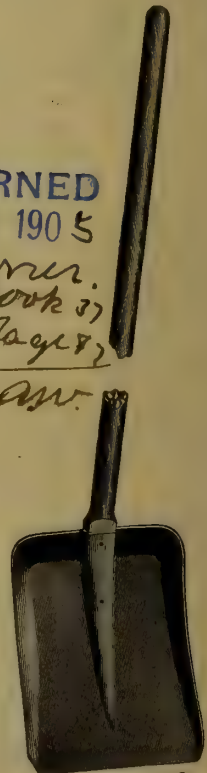
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To Owner.
Cut Book 37
Page 87
a.m.

PALLADIUM AND ITS USES*

By Joseph Wharton,
Sc.D., LL.D.

ALTHOUGH palladium belongs to the platinum group of metals, it is in some respects nearly related also to silver, its atomic weight and specific gravity being respectively about 107 and 11.4, while the corresponding figures for silver are 108 and 10.5. In its high melting point, however, of 1500 deg. C., it approaches more nearly to platinum which melts at 1705 deg. C., and in color its grayish-white resembles the color of platinum more nearly than that of silver.

Palladium has long been known to occur native in company with platinum, and also alloyed with gold in the Brazilian mineral porpezite which contains about 5 to 10 per cent. of it. That it occurs in notable quantity in the nickeliferous pyrrhotite of Canada is an important recent observation.

WHERE IT IS FOUND.

Both platinum and palladium probably exist to a greater or less extent in all the many deposits of nickeliferous pyrrhotite throughout the world; certainly in those of Norway and Sweden, and particularly in every one of the numerous deposits of that mineral which are found in the Laurentian and Huronian rocks surrounding the little town of Sudbury, in the Province of Ontario, Canada. The quantity, however, is extremely small, varying from a mere trace to one or more ounces per ton; the

average for each metal being about one-hundredth of an ounce per ton of ore, platinum and palladium usually being present in approximately equal parts.

Yet, though known to exist in many parts of the world, palladium has not been diligently sought for, because there was until recently no considerable demand for it; the reworking of platinumiferous residues from the mints of several countries having supplied most of that which appeared in commerce. The prevailing scarcity of platinum is now directing attention to palladium as a practical substitute for some purposes.

THE SUDBURY DEPOSITS.

The nickeliferous pyrrhotite deposits of the Sudbury region have recently become the most important source of nickel in the world and appear certain to continue so for many years, having quite surpassed in yield the great nickel-silicate ores of New Caledonia which come next in rank. In these Canadian ores, silver, gold, platinum, iridium and rhodium occur as well as palladium; all in very minute quantities—palladium as above mentioned to the extent of about .01 oz. per ton.

The form in which palladium there occurs has not been detected, for owing to its minute quantity and the consequent difficulty of isolating it, none has yet been directly observed in any ore of that region; since, however, platinum occurs there as arsenide in the interesting mineral sperrylite (Pt,As₂), palladium may exist in similar combination, though none has been observed in any specimen of sperrylite that has been examined. Prof. Horace L. Wells indeed notes a trace of palladium is sperrylite, but this, has not I think been confirmed in any of the careful analyses of other good chemists.

In the one mine where platinum-arsenide has been found, Prof. Wells says it occurs in small pockets of decomposed rock at the contact of ore and rock, these pockets being filled with loose gravelly material. It was in the metallic sparkles of that sandy stuff where the sun's rays struck it that Mr. Sperry first noticed what proved to be platinum-arsenide—a substance till then unknown.

ITS APPEARANCE.

Ten years ago, when I visited the mine in question, the Vermillion Mine, I observed, upon the surface of the

ground where the ore had been dumped, a moderate quantity of sand which appeared to have resulted from the disintegration and metasomatism of ore by atmospheric penetration, and this seems to afford a plausible explanation how palladium-arsenide might have been present in the ore with platinum-arsenide and yet no palladium be now detectable in the sperrylite; for the greater oxidability of palladium may have led to the conversion of its arsenide into arseniate, afterward leached away by the percolating water.

Though the Vermillion Mine is not at present in operation, it affords, as above stated, the only indication we have as to the probable condition of both platinum and palladium in the ores of other mines in that region from which those metals are extracted, though neither metal has been directly observed in any of those other mines.

The ore from those other mines is not simply nickeliferous pyrrhotite, but is also to a considerable extent chalcopryrite, yielding therefore much copper, as well as nickel and minute proportions of the above-named precious metals. The ores of the various mines in the Sudbury region may be reckoned as containing 1½ to 8 per cent. of nickel (some small quantities even 30 to 40 per cent.) and 1 to 4 per cent. of copper.

THE REFINING PROCESS.

Those ores are roasted in open heaps and then smelted into matte containing by average about 30 per cent. of nickel and copper, and containing also practically all of the precious metals which the ores carried.

After further roasting and smelting, the concentrated matte is treated for separation of copper from nickel, which is effected by repeated melting with nitre cake and coke in cupola furnaces. The coke converts the nitre cake into sodium sulphide; when the charge is run out of the furnace and cooled it separates easily into two parts, the bottoms containing practically all the nickel, the tops consisting of sodium sulphide and copper sulphide; the gold and silver going with the tops, the platinum-group metals going with the bottoms.

In the refining processes that follow, palladium is obtained as a slime, carrying about a thousand times as much palladium proportionally as did the original ore, carrying also the other

* The importance of this paper, from a commercial as well as a scientific standpoint, will be quite evident to all readers. The fact that palladium, because of the similarity of its properties to those of platinum, may take the place of that metal for many purposes is of great importance, and this fact has a double interest for industrial Canada in that palladium at the present time is being produced by the Orford Copper Co. from Canadian nickel-copper ores.

In view of this fact it would be interesting to note the physical properties of platinum and palladium. The specific gravity of platinum is 21.5, it being the heaviest known substance with the exception of osmium and iridium, while that of palladium is 12.1. Platinum is worth about the same as palladium by weight, but by volume, which is the chief consideration, the ratio of their cost is the ratio of the figures representing the specific gravity of each; thus by volume palladium is somewhat over half the commercial value of platinum. Platinum costs a little more by weight than gold.

Platinum ore is found in copper ore in the Alps as well as in copper ores at Sudbury, Ont., and in other parts of America. The metallic platinum, obtained from the ores by a chemical process, contains traces of iridium which add to the hardness and tenacity of the metal. Pure forged platinum has a high lustre, being almost as white as silver, and is very ductile and malleable. Because of its high melting point it can only be fused by the electric current. It is not attacked chemically by any single acid. Because of these properties this metal is very useful in the chemical laboratory for the construction of crucibles, evaporating dishes and stills used in the concentration of oil of vitrol.

Palladium closely resembles platinum in its malleability and ductility, but has not such a high fusing temperature. It is, of course, less dense than platinum, having a less specific gravity, and is more silvery in appearance. Unlike platinum it is very slightly soluble in the concentrated mineral acids. Palladium ore occurs usually in grains with platinum ore.

Thus palladium has the properties necessary to enable it being used as a substitute for platinum for many purposes, although for crucibles, evaporating dishes, etc., palladium is not quite so suitable as platinum because of its lower fusing temperature and its being acted upon slightly by the concentrated mineral acids. Editor.

platinum group metals, and the gold and silver.

SEPARATING PALLADIUM.

This palladium-bearing slime is melted and refined in a small reverberatory furnace, from which it is ladled out into cold water, forming shot which are charged into small leaden towers, into the top of which hot dilute sulphuric acid is run. Palladium and the other precious metals being electro-negative to the base metals, a galvanic action now takes place in which nickel, copper and iron dissolve rapidly, leaving palladium in a black mud containing two per cent. or more of that metal. If this residue still contains much copper, that is mostly eliminated by further treatment with hot sulphuric acid until the stuff contains about 25 per cent. of palladium, when it is treated with aqua-regia, thus dissolving all the platinum, palladium and gold.

From this solution platinum is precipitated by ammonium chloride, the palladium in the filtrate is electrolytically precipitated with a platinum anode, appearing as a dull gray metal which is hard and brittle, peeling off easily from the cathode. It is then dried and ignited in a reducing atmosphere, when it takes great brilliancy and becomes very soft and pliable, capable of being worked into any ordinary form. I have, for instance, a remarkably nice teaspoon made of it.

If air is not completely excluded during ignition the palladium will oxidize on the surface, taking most beautiful colorations of pink and green. When prepared as above stated palladium is almost absolutely pure, but for occasional traces of copper and iron.

I purposely refrain from giving all details of the various stages of the process by which pure palladium is finally attained, but enough is stated to show that a complete working system is established, requiring, of course, delicacy of perception and dexterous manipulation, yet yielding at last a beautiful substance capable of sundry uses, which are undeveloped only because no regular supply could hitherto be counted on. The steady production of palladium by the Orford Copper Co. is now more than 3000 ounces annually, from approximately 300,000 tons of Canadian ores treated. It is obvious that only as a by-product in the working of very great quantities of ore can palladium be produced as here stated.

PROPERTIES OF PALLADIUM.

Besides having so very high a melting point, and being at the same time both hard, ductile and malleable, palladium is so absolutely non-corrodible that a sheet of it may hang for a long time in a laboratory exposed to chlorine and

hydrogen-sulphide gases without losing its polish or tarnishing.

The wonderful occlusion or absorption of hydrogen by palladium deserves special attention and invites further study.

The volume of hydrogen thus absorbed varies greatly under different circumstances, and has been variously stated by different observers. According to Graham (Phil. Mag.,—4—32, 401, 503):

Fused palladium at 200°.....	absorbs 68 volumes
Finely divided palladium at 200°.....	" 686 "
Sheet palladium at ordinary temperatures (after ignition).....	" 377 "
Sheet palladium at 90° to 97° (after ignition).....	" 643 "
Sheet palladium at 245° (after ignition).....	" 526 "

In Poggendorff's Annalen for 1869, Graham describes experiments in which 900 volumes were absorbed.

The greatest absorption observed before the experiments of McElfresh (mentioned below) was shown by electrolytically precipitated palladium; the maximum being 982.14 volumes of hydrogen.

Schmidt (Ann. Physik., iv, 13,747), J. Chem. Soc., 85, 86, 312 (1904), finds that the volume of hydrogen absorbed by palladium increases with the fall of temperature to about 140 deg.; below this he finds concordant results. From 140 deg. to 300 deg. the absorption curve approaches a straight line. Absorption, and also diffusion, increases with pressure as well as with temperature.

Hoitsema (Zeit. physikal. Chemie., 1895, 17, 1,) J. L. C. S., 78, 41,388 (1895) examines the hypothesis of Troost and Hauteville, that in the absorption of H by Pd a compound is formed represented by Pd₂H, but he does not agree with those authors. Debray thought the compound Pd₄H was formed. Why should a chemical formula be sought for the compound of palladium and hydrogen since they combine together in practically all proportions, thus indicating it to be a simple alloy?

McElfresh (Proc. Am. Acad. Arts and Sciences, vol. xxxix, No. 14, Jan, 1904), examining critically the influence of occluded hydrogen upon the electrical resistance of palladium, finds that resistance to increase constantly, but not at a uniform rate, as the occluded hydrogen increases; the maximum increase of the resistance being 68 per cent. when 1030 volumes were occluded. This absorption, reached by continuous exposure for 30 hours, is the highest yet observed and probably indicates complete saturation.

McElfresh considered Knott's method (Proc. Roy. Soc. Edin., vol. xii, 1882, 1883), of determining the amount of occlusion, by measuring the increase in weight of the palladium treated, to be incapable of accuracy; he was also dissatisfied with the results obtained with imperfect apparatus by supplying to

palladium a measured quantity of electrolytically produced hydrogen and deducting therefrom the quantity remaining after various periods of absorption. He therefore avoided the error inherent in such apparatus by using in this latter method ingenious apparatus of his own devising, thus reaching conclusions which appear quite reliable.

It is remarkable that Richter's Chemistry, as translated by Edgar F. Smith, states (p. 46) that the conductivity of palladium for both heat and electricity is little affected by its occlusion of hydrogen.

As for the discharge of occluded hydrogen from palladium, Graham states that "the gas exhibits no disposition to leave the metal and escape into a vacuum at the temperature of its absorption." Edgar F. Smith informs me that he finds charged palladium immersed in water at 160 deg. to give off hydrogen with freedom comparable to the escape of carbonic acid from soda water.

Baskerville informs me that, in examining palladium for radio-activity, he found none in either of the two forms I sent him at his request for that purpose—namely, electrolytically deposited scale such as mentioned above in this paper, and similar scale which had been fused into a large button. But when he examined the same specimens after charging them in a finely divided state with hydrogen, he found slight indications of radio-activity in the first, but none in the second. He therefore asks whether, during the electro-deposition, a tension might have accumulated which appeared afterward as beta-rays. Query: If so, why should the electro-scale require charging with hydrogen to enable it to indicate radio-activity?

Sir William Ramsay, to whom I mentioned this experiment and surmise, suggested the possibility that the original ore might have contained a trace of radium, which persisted with the palladium until the final fusion vaporized it or passed it to the slag.

CHEMICAL CHARACTERISTICS.

Among the chemical characteristics of palladium may be mentioned these, not

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of course as novelties but as practically useful:

1. It is completely precipitated from an acid solution as sulphide by hydrogen-sulphide.

2. It is thrown down as a black precipitate from even a dilute solution by potassium-iodide. This very sensitive reaction is important in practical treatment of material containing palladium.

3. It is precipitated by mercury-cyanide as white slimy palladium cyanide: a property useful for quantitative determination in laboratory.

Among the uses hitherto of palladium are:

1. For the mechanism of delicate instruments such as chronometers, and for verniers, etc., of astronomical instruments.

2. For surgical instruments.

3. For plating searchlight mirrors. Why not for the mirrors of reflecting telescopes?

4. For alloying with silver to make dental plates, etc., instead of the 2-3 silver, 1-3 platinum hitherto used in Europe. Also as palladium amalgam for fillings in cavities of teeth.*

Other uses will naturally arise as men's minds are turned toward this metal, which, while in many respects equal to platinum, sells for no more than the price by weight of that metal, and of course therefore for much less than that by bulk; the specific gravity of platinum being variously stated as 17 to 19, and that of palladium as 11.4 to 11.8.

It would seem that palladium might be useful under some circumstances for resistance wire.

I conclude by remarking that, in the several reports by the Canadian Government upon the metallic and mineral resources of "The Dominion," palladium is never mentioned; not even in the report for 1904.

DESIRES CANADIAN AGENCY.

Mr. Charles E. Davidson has left the Magnolia Metal Co., Montreal, to open up business in Montreal as manufacturers' agent. Mr. Davidson has a wide acquaintance in the trade and would like to correspond with any manufacturers desiring a Canadian agent.

*Palladium amalgam has been used to but very small extent for tooth fillings, though well adapted for that use except for its dark color, arising apparently from palladium black being used to form the amalgam, which is made by the dentist at the moment he wishes to use it, by triturating palladium black with mercury. That darkness of color might probably be obviated by using fine palladium filings instead of palladium black.

Dr. Joseph Pettit, a careful observer, told me he had found this amalgam so made to become too hot to be comfortably held in the hand. Dr. W. Storer How, of the S. S. White Dental Co., informed me that he had noticed some warmth evolved in the making of the amalgam. I observed very little heat, no more in fact than I thought referable to the friction of trituration.

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1321

NO FOUNDATION FOR REPORT.

IN its issue of November 23, the Mail and Empire published the following dispatch from Detroit, dated Nov. 20: "Mr. C. D. Warren, of Toronto, president of the Lake Superior Corporation at the 'Soo', made a flying visit to Detroit yesterday and inspected the work of a local firm which has been experimenting on a new process for smelting and refining nickel and copper ores. He was accompanied by Mineralogist Shustedz, the corporation's expert, and both expressed themselves as exceedingly well pleased with the prospects.

"The experimenting was begun two years ago, when Mr. Clergue was first trying to refine ores from his rich Sudbury properties, without bowing the knee to the International Nickel Company, of New Jersey, commonly known as the 'Nickel Trust,'

which refuses to refine ore not taken from mines under its domination.

"The new process evolved by the Detroit firm is described as one of the simplest imaginable, yet one which is destined to revolutionize the nickel and copper industries of the country, if it accomplishes one-half of the expectations entertained. The Lake Superior Corporation is preparing to try the new process on an extensive scale, though no new plant is contemplated. The one at the 'Soo' now used for reducing the ore to matte is said to afford sufficient accommodation for present purposes."

Mr. C. D. Warren was seen by a representative of Hardware and Metal regarding this dispatch. He stated that there was no truth in the statement that he had been in Detroit to inspect a new process of smelting nickel ores, but that the object of

his visit to Detroit was to view some ore-crushing machinery. He says that at present the company are making no preparations to try any new process, and that the smelting plant at the 'Soo' will be run as it has been. What may be done in the future in this respect he is not prepared to state.

COAL IMPORTATIONS.

DURING the year ending June 30 last, the total amount of soft coal imported to the Dominion was 4,053,900 tons, of which 3,930,665 tons came from the United States, and the balance of 123,235 tons from Great Britain. In the same period 2,275,018 tons of hard coal came into Canada, of which 2,261,601 tons were from the United States, and the remainder of 13,417 tons from Great Britain. Thus with soft and hard coal combined the total imports for the year under notice were 6,328,918 tons of which 6,192,266 tons were received from the United States, and the balance of 136,652 tons from Great Britain.

In the corresponding period ending June 30th, 1903, 3,511,412 tons of soft coal were imported into Canada, of which 3,421,850 tons came from the United States and 89,562 tons from Great Britain. The hard coal imported totalled 1,456,713 tons; 1,394,675 tons being from the United States, and 62,038 tons from Great Britain. The complete imports for the year were 4,968,125 tons of which 4,816,525 tons were sent from the United States, and the balance of 151,600 tons from Great Britain.

It will thus be seen that there was the large increase of 1,360,793 tons in 1904 as compared with 1903, of which 1,224,141 tons affects the United States.

FUTURE OF N. S. COAL INDUSTRY.

COMMENTING on what was said at a recent meeting of the Mining Society of Nova Scotia, about the coal industry of that province, the Halifax Herald says that the rapid development in recent years of the coal interests of Nova Scotia has brought coal owners face to face with the question of market. "It has taken them a quarter of a century to fill up that portion of the domestic market that is available, namely, the Maritime Provinces and St. Lawrence to Montreal, and if the industry is not to remain at a standstill, at its present output, additional market is required. In only two directions can this be obtained, namely, in Ontario or in New England. From the latter we are shut out by a hostile duty of 53 cents per net ton. From

Ontario we are shut out by transportation charges. The United States control both markets.

"The proximity of the New England centre of population to our mines and the cheapness of water carriage to them, render the latter the most natural outlet for our coal. The same reasons render Ontario a natural market for Pennsylvania coal. On the surface it would seem a matter of international economy for both sides to drop the duty and avoid forcing coal out of its natural channels. Other considerations, however, come in play. If the duty were removed can our mines compete in New England with the cheaply mined product from West Virginia? The latter costs on board, say 85 cents per ton, against \$2 or more for our coal. Our freight is \$0.60 against \$2 or more from West Virginia.

"While our mine owners to-day seem to be dubious about being able to secure a foothold in New England, it may be stated that the mine managers of thirty years ago entertained no such fears. They only supported a duty when all their efforts for free coal proved unavail-

ing. If they decide against the New England alternative, how can they reach the Ontario markets? Pennsylvania coal is selling in, say Toronto, cheaper than Sydney coal in Halifax, though the former is saddled with the duty. The distance from Toronto to Sydney is 1,112 miles; from Toronto to the Pennsylvania mines 300 miles. The difference, 800 miles, would seem almost an insuperable obstacle to shipments even to Toronto.

"It has been suggested that the St. Lawrence canals could be deepened to allow large ocean tonnage to go through to the great lakes, and that in the meantime the duty on coal could be increased to afford larger protection to Nova Scotia shipments west of Montreal. It is a question if these provisions, if carried into operation, would be effective, and if the west, which is taxed already nearly two millions of dollars in the way of coal duty, would consent to additional duties. In answer to this, it may be stated that the manufacturers of the west are almost a unit in favor of higher duties and could scarcely shunt off the claims of Nova Scotia."

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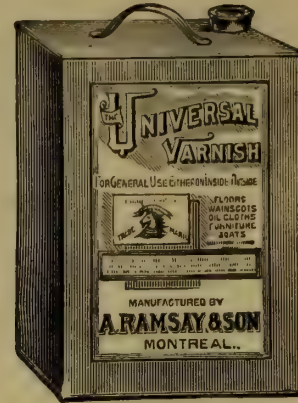
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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Dec. 1, 1904

WITH the closing of navigation there has been a decided falling off in the direction of heavy plumbing goods, but even with that condition prevailing there is a good share of business passing. The heating market keeps up apparently undisturbed by

any external condition. The demand has been as large, if not larger than in other weeks, and all lines associated with heating are active. Prices continue without any change, but lead pipe, iron pipe, and brass goods are firmer, an advance in the latter in particular being expected without delay.

Range Boilers—The heating season continues at its height and range boilers are being called for in large numbers. Our quotations are as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—There is no increase over the advance noted in lead pipe last week, although the market is still very firm. The demand is very considerable. The discount which was formerly 35 per cent. is now only 30 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—The open weather recently, which gave rise to a large demand for soil pipe and fittings, has come to a close and consequently the market is less active. Quotations are: Soil pipe, standard, 50 per cent and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—There is a fairly brisk market in iron pipe fittings this week, but prices remain as before. Discounts on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—The heating trade still creates a large demand for iron pipe, making it a particularly active market. There is a firmer tone and less cutting being indulged in. Prices remain as before. Our quotations are: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20;

2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Dec. 2, 1904.

ON account of the large amount of work being done on the inside of buildings, orders still continue to pour in. The country trade, which was such a strong factor this Fall, is beginning to abate, owing to the fact that building operations have been suspended on account of the lateness of the season. Operations in local circles continue unchanged, however, and the supply dealers look forward to a strong demand all Winter.

The market for iron pipe fittings is unsettled. The American market has advanced the price and an advance is looked for on the local market.

During the week we have added to our list galvanized iron range boilers. Trade is brisk in this line of goods, and good sales are reported.

Lead Pipe—Trade is brisk. Demand has increased, and the amount of discount has decreased 5 per cent. We quote: Lead, 7c; lead waste pipe, 8c; discount 30 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—The demand continues unchanged, prices are unsteady. An increase of 5 per cent. is current on headers and nipples. Indications point to an advance.

Our quotations nominally are: Malleable fittings 20 per cent. for American and 35 per cent. for Canadian; cast iron (standard), bushings, 65 per cent.; headers, 60 per cent.; flanged unions, lipped, 60 per cent.; malleable bushings, 57 1-2 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A steady demand continues with the discount unchanged at 15 per cent.

Galvanized Iron Range Boilers—Trade is brisk. A set price has been quoted on this line of goods, and is as follows: 12 gallons capacity, standard, \$4; extra heavy, \$6; 18 gallons, standard, \$4.25; extra heavy, \$6; 24 gallons, standard, \$4.50; extra heavy, \$6.50; 30 gallons, standard, \$4.50; extra heavy \$6.50; 35 gallons, standard, \$5.50; extra heavy, \$7.50; 40 gallons, standard, \$6.50; extra heavy \$8.50; 52 gallons, standard, \$10; extra heavy, \$13; 66 gallons, standard, \$16; extra heavy, \$19; 82 gallons, standard, \$19; extra heavy \$22; 100 gallons, standard, \$24; extra heavy, \$29; 120 gallons, standard, \$28; extra heavy, \$35.

Iron Pipe—Trade continues good. The

market is steady. Our quotations are: Black, 1-4 inch, \$2.03; 3-8 inch, \$2.14; 1-2 inch \$2.29; 3-4 inch \$2.87; 1 inch, \$4.12; 1 1-4 inch, \$5.62; 1 1-2 inch, \$6.75; 2 inch, \$9. Galvanized, 1-4 inch, \$2.86; 3-8 inch, \$2.97; 1-2 inch, \$3.14; 3-4 inch, \$4.02; 1 inch, \$5.77; 1 1-4 inch, \$7.87; 1 1-2 inch, \$9.45; 2 inch, \$12.60.

Solder—Prices continue unchanged. Market is unsteady owing to fluctuating tin and lead market. Bar solder is quoted at 17 1-2c and wire at 18c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 5 1-2 feet, 2 1-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 2 1-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D, A quality, \$5.40; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

and were done full justice, especially by the veterans of the carper ball fight. After refreshments were served some lingered over cards, chess and other games for awhile.

Heating a Building.

A WRITER from Ottawa, signing "H. W. J.," says: "I am putting up a new building and would like to know if there is any simple rule whereby the pipe surface for a heating system may be calculated." In answer to "H. W. J.'s" inquiry and for the benefit of others a rule for heating a building is given herewith.

In the first place, consider any one room in the building. Now, it stands to reason that if this room has three sides of its wall surface exposed to the outside atmosphere, it will require approximately three times as much heating as if only one side were exposed, and this is first to be considered before any calculation can be made. The heating surface should be directly proportional to the cooling surface, and the glass of the windows and the outside walls form the largest factors in cooling. Glass is taken as the highest cooling factor and in his book on heating, Baldwin gives it a value of one thousand, oak and walnut sheathing on walls 66 to 100, white pine or pitch pine 80 to 100, lath and plaster, wall good, 75 to 100, lath and plaster, wall common, 100 to 150, common brick, rough, 150, common brick, hard finish, 200, hollow walls hard finish, 150, and sheet iron 1,100 to 1,200. A square foot of glass and a square yard of ordinary outside wall surface have about the same cooling effect.

It has been found from long experience that one square foot of heating surface, with steam at one pound pressure, will just about offset the cooling done by two square feet of glass, when the outside temperature is 70 degrees. This is now well recognized, and from it Baldwin deduced the following rule: "Divide the difference in temperature between that at which the room is to be kept, and the coldest outside atmosphere, by the difference between the temperature of the pipes and that at which you wish the room to be kept, and the result will be the square feet or fraction thereof of pipe surface to each square foot of glass, or its equivalent. For example—temperature of the room, 70 degrees; temperature outside, no degrees; difference, 70 degrees. Again, temperature

TORONTO PLUMBERS' SOCIAL EVENING.

A MOST successful social evening was held by the Toronto Master Plumbers' Association in Richmond Hall on Monday last, at which a large number of plumbers and supply men were present.

The first item on the programme was a debate: "Resolved, that the intercepting trap and breather are necessary to a plumbing system in Toronto." Although the debate was got up on the spur of the moment and those taking part had very little time to gather together arguments and data in reference to the question there was without doubt an exchange of ideas that would prove advantageous.

The time allotted to each speaker was five minutes and the debaters were: For the affirmative, Geo. Clapperton and J. McKittrick; for the negative, L. LeGrow and H. J. Hayes. The judges were to have been Messrs. R. Ross, Wm. Mansell and F. Armstrong, but in the absence of Mr. Ross, Mr. J. B. Fitzsimons acted. The honors of the debate were given to the negative.

After the debate came a carper ball battle between the plumbers and the supply men, which was keenly contested. The final result for the first carper was 9 to 15 in favor of the plumbers, and

the result for the second rink was 8 to 10 also in favor of the plumbers.

The players on the first carper were:

Supply men—Messrs. P. McMichael, Dominion Radiator Co., captain; Brewer, Gurney Foundry Co.; D. World, James Morrison Brass Mfg. Co.; Hadley, James Morrison Brass Mfg. Co.; Webb, James Robertson Co.; Gowanlock, Toronto Hardware Co.

Plumbers—Messrs. Wm. Meredith, captain; P. Hayes, L. LeGrow, J. B. Fitzsimons, J. J. McKittrick, Wm. Mansell.

The players in the second carper were:

Supply men—Messrs. Chas. World, James Morrison Brass Mfg. Co.; Rogers, James Robertson Co.; W. B. Malcolm, Hoelfwell, Gurney Foundry Co.; P. Hoffman, Canada Radiator Co.; Spense, Ontario Lead and Wire Co.

Plumbers—Messrs. C. H. Deavis, J. K. Wilson, R. Harrison, P. Jessiman, Geo. Cooper, W. Erwood.

The umpires were Messrs. F. Armstrong and Geo. Clapperton. Those present not taking part in game of carper ball either watched the developments of the game or amused themselves with cards, chess or dominoes.

After the excitement over the game had subsided refreshments were served,

December 3, 1904

HEATING AND PLUMBING

Hardware and Metal.

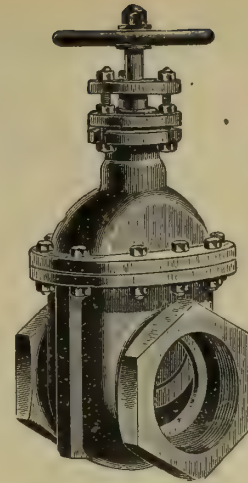
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PENBERTHY INJECTOR Co.,
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BRASS MFRS. **Windsor, Ont.**



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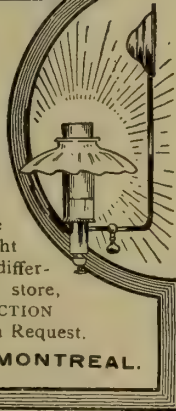
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International Stock Food

was good food. He was using it and saw the results, and of his
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This is the universal testimony. This is why dealers become
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Good Trade. Continuous Trade.

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The Finishing Touch

in the construction of any
building is the roof. With-
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the entire appearance and service of
the building is unsatisfactory. Gal-
vanized iron, tin, tar and shingles are
being discarded on account of their unsatisfac-
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is fast becoming the universal roofing. It costs less
laid than shingles, will outwear several galvanized
iron roofs, is absolutely waterproof, and many build-
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Our book on roofing, which we will send with free
samples, is yours for the asking.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

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P-H



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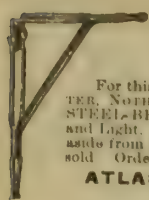
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TAKE NO OTHER.

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FORWARDING and DISTRIBUTING AGENTS,
FREE AND BONDED STORAGE

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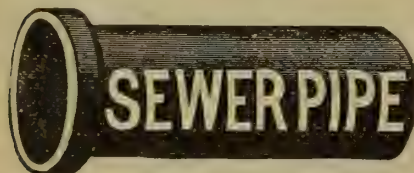
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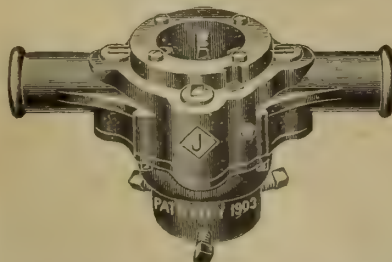
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THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
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JARDINE PATENT PIPE DIES

Make Hard Work Easy.



The Herbert Jones Co., Steamfitters, Hamilton, Ont., say:—With this Die one man is quite capable of accomplishing what formerly took two men to perform.

A. B. JARDINE & CO.

Mfrs. TAPS and DIES.

HESPELER - - - ONTARIO

of the pipe, 212 degrees; temperature of room 70 degrees, difference 140 degrees. Result when divided equals .49 square feet, or about one-half a square foot of heating surface, to each square foot of glass or its equivalent.

The heating surface found in this way offsets only the windows and cooling surface it is figured against, and no allowance is made for cold air admitted under loose windows, or between the boards of poorly connected woodwork. The other conditions when they exist, must be provided for, and sometimes about 50 per cent. additional is allowed, this being considered a good general allowance for ordinary purposes, making it 3-4 of a square foot of heating surface for each square foot of glass surface, or its equivalent. It should be remembered also that rooms exposed to north winds in our Canadian climate should be given an extra allowance of heating surface.

Building Notes.

The City of Brantford is to have a new and costly hotel.

The Roman Catholics of St. Claire are to build a new church.

Winnipeg Paint & Glass Co., Winnipeg, intend erecting a new warehouse.

Thos. Greenway, Crystal City, has purchased land and purposes erecting a postoffice building.

The Guelph board of education will ask for a \$28,000 extension to the collegiate in that city.

The Ogilvie Milling Co., Fort William, have purchased land with the intention of erecting a new office.

Hawkins & Scott, of Swan Lake, Manitoba, will erect a large warehouse near the railway station.

John McLaurin, a merchant of Fort William, has purchased a site on which he intends to erect a store.

The St. Andrew's Society of Winnipeg have decided to erect a new hall and a site has already been chosen.

In the Spring the Orange Association of Toronto will erect a new hall costing in the neighborhood of \$15,000.

The Eastern Building Co., of New York, have commenced the erection of six hundred dwelling houses in Hamilton.

George Ryan, of Winnipeg, has decided to build a block of seven stores and samplerooms on the corner of Princess street and Notre Dame avenue.

Building Permits.

TORONTO.

L. C. Shepphard, dwellings, Rathnally avenue, near McPherson avenue, \$4,000;

dwellings on Rathnally avenue, near McMaster avenue, \$8,000.

H. B. Woodby, dwelling, No. 253 Avenue road, \$3,500.

R. T. McIntyre, store, No. 1226 Yonge street, \$1,500.

Jas. M. Purvis, dwelling, No. 19 Saulter street, \$1,500.

W. J. Bolus, warehouse, rear of No. 245 Yonge street, \$2,000.

A. Stemmann, dwellings, Euclid avenue, near Ulster street, \$4,000.

W. J. Hewitt, dwelling, Langley avenue, near Howland road, \$1,500.

John Drummer, dwellings, Dovercourt road, near Shanly street, \$2,000.

F. Males, dwellings, Marguerretta street, near College street, \$2,600.

Mrs. Jos. Kent, dwellings, Nos. 121 and 123 Gorevale avenue, \$3,000.

Pike & Elliott, dwellings, Manning avenue, near Ulster street, \$3,600.

Mrs. Byrne, dwellings, Dagmar avenue, near Brooklyn avenue, \$2,000.

A. H. Tandy, dwellings, Millicent street, near Dufferin street, \$1,200.

J. J. McKinney, dwellings, Grace street, near College street, \$4,000.

Holt & Davitt, dwellings, Bathurst street, near Harbord street, \$4,500.

E. M. Croker, dwellings, Blackburn avenue, near Gerrard street, \$1,000.

A. Elliott, dwelling, corner of Avenue road and Cottingham street, \$3,500.

C. Mould & Co., dwellings, Dupont street, near Bathurst street, \$8,000.

J. Nightingale, dwellings, Wright avenue, near Sorauren avenue, \$2,100.

Thos. Henry, dwelling, North Crawford street, near Thorn street, \$1,000.

MacDonald Mfg. Co., stables, Catharine street, near Peter street, \$1,000.

J. Drummer, dwellings, corner of Dovercourt road and Shanly street, \$4,500.

Trustees Christian Association, church, corner of Carlton and Ontario streets, \$2,500.

MONTREAL.

F. V. Clissdale, St. Etienne street, one shed, \$4,000.

Henry Gareau, Boyer street, one house, two dwellings, \$1,900.

C. Brasseau, Labelle street, two houses, four dwellings, \$3,000.

Felex Maineau, Aylwin street, one house, three dwellings, \$2,500.

S. D. Valliere, Marquette street, three houses, six dwellings, \$4,500.

Douclos & Roche, Couillier street, one house, four dwellings, \$3,600.

Jos. Harol, Frontenac street, one house, three dwellings, \$2,500.

L. A. Robillard, Amherst street, one house, three dwellings, \$1,800.

Herbert Phillippe, St. Hubert street (in rear) one house, three dwellings, \$1,800.

A RECONSTRUCTED HARDWARE STORE

THE SMYTHE HARDWARE CO., TORONTO.

AFTER many years of varied as well as successful experience in the hardware business, the Smythe Hardware Co. have bought out the plumbing, tin-smithing, gas fitting and hardware business of Joss & Co., 276 College street, Toronto. The last mentioned company have used the store at this address for some ten years and have found it to be a



Mr. H. J. Smythe.

good location for a hardware business.

The Smythe Hardware Co. composed of H. J. and W. E. Smythe, have been connected with the hardware business for a great number of years both in Canada and the United States.

As the reader will notice by the accompanying illustration, the building has a double window frontage, is twenty feet in width, and eighty feet in length. The basement and ground floor are alone used for business purposes, the others are let as residential quarters.

As the visitor enters the store, one of the first things that draws his attention is a background of bright colors which helps to give the store a cheerful appearance and which blends harmoniously with the other colored fittings of the premises. On closer inspection he finds that these colors come from the wrappers of paint and varnish tins, which occupy shelves running across the rear end of the store and reaching from the floor to within five feet of the ceiling. Mr. Smythe does not by any means believe in patronizing any one man's manufac-

tured wares, but on the other hand has stocked his shelves with a variety of brands.

Turning away from the fine array of paints, the visitor sees displayed on the eastern wall of the building, by means of the Bennett Patent Shelf Box, a great variety of shelf hardware. These shelf boxes take up the entire wall space, with the exception of a five-foot space running along the top, the width of a door which leads into the oil and glass department and a vertical show case which measures five by eight feet, and in which are shown a great variety of saws. In this case the point referred to in connection with the paints is quite evident again; nearly a dozen manufacturers have their goods displayed. These shelf boxes are painted green, and for this reason show out well against the dark red fittings of the building.

Glancing at the other side of the store, the visitor notices displayed on the many red colored shelves that cover this wall of the building, a goodly array of articles of steel, granite ware, numerous

tioned farther to the rear of the counter contains a complete line of cutlery. Under the counter are small compartments containing nails, spikes, etc.

Running down the centre of the floor space is a wooden frame of two shelves, some thirty feet in length and about four feet in width. This is the principal fixture for displaying goods in the establishment and was built upon the experience gained by Mr. Smythe from his sojourn in the United States. This is called the "silent salesman," and is so constructed that goods may be displayed on both shelves and upper frame, nothing being hidden and all quite easily seen by the prospective purchaser. On this modern display stand is to be found a full line of household goods, both large and small.

Doubtless many readers of this article will by this time wonder why Mr. Smythe has left a space of five feet running along the top of the shelves that line each wall and end of the store. Although this space is rather inconvenient, it is the intention of Mr. Smythe to display in it



Exterior of the Smythe Hardware Co.'s Store, Toronto.

tin articles and galvanized ironware.

On the right hand side, entering the store, is the counter, some twenty-five feet in length and also painted a dark red color. A glass showcase with silver mountings, covers the front end of the counter, in which are displayed a full line of Auer lights and other gas fixtures. Another glass showcase which is sta-

a complete line of those Christmas toys pertaining to the hardware business. Owing to the very flashy colors that cover those toys, when manufactured, Mr. Smythe counts on these goods receiving ample attention, although they are displayed in a rather peculiar way, and doubtless this idea, because of its originality, will be a success.

WESTERN ASSURANCE COMPANY.

Incorporated 1851

**FIRE
AND
MARINE**

Head Office Capital - \$2,000,000.00
 Toronto, Assets, over - - 3,546,000.00
 Ont. Annual Income - 3,678,000.00

HON. GEO. A. COX, President.

J. J. KENNY, Vice-President and Man. Director.

C. C. FOSTER, Secretary.

Money

CAN BE SAVED BY MEANS
OF AN ENDOWMENT POLICY.

**YOU CAN ONLY SECURE
SUCH A POLICY WHILE YOU
ARE IN GOOD HEALTH.**

Pamphlets and Full Particulars regarding the
New Accumulation Endowment Policy
sent on application.

Confederation Life ASSOCIATION.

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HEAD OFFICE, - TORONTO, CANADA.

MANUFACTURERS AND MERCHANTS.

It may be necessary for your staff to have fidelity
bonds. We act as surety on such. We are known the
world over.

Write to us for terms and particulars.

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D. W. ALEXANDER, General Manager for Canada,
Canada Life Building, TORONTO.

BRITISH AMERICA ASSURANCE COMP'Y

FIRE AND MARINE.

Incorporated 1833

CASH CAPITAL, \$1,000,000.00.

TOTAL ASSETS, \$2,024,096.02.

LOSSES PAID SINCE ORGANIZATION, \$23,886,005.32.

HEAD OFFICE, - BRITISH AMERICA BUILDING,
Cor. Front and Scott Sts., Toronto.

HON. GEO. A. COX, President. J. J. KENNY, Vice-President
P. H. SIMS, Secretary. and Managing Director

THE CANADIAN BANK OF COMMERCE.

Paid-up Capital, - - - \$8,700,000
 Rest, - - - \$3,000,000

HON. GEO. A. COX, President. B. E. WALKER, General Manager.

HEAD OFFICE: TORONTO, CANADA.

This Bank, with 111 branches, covering all the principal cities of Canada and the Pacific coast of the United States, and its own offices in London, Eng., and New York, is able to offer to those engaged in mercantile business of any kind unexcelled facilities for any legitimate banking business.

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BRITISH COLUMBIA:

Atlin	Greenwood	Nanaimo	Vancouver
Cranbrook	Kamloops	Nelson	" East End
Fernie	Ladysmith	New Westminster	Victoria

MANITOBA AND NORTHWEST TERRITORIES:

Calgary	Elgin	Moose Jaw	Regina
Carman	Elkhorn	Moosomin	Swan River
Dauphin	Gilbert Plains	Nanton, Alta.	Treherne
Dawson	Grandview	Neepawa	White Horse
Edmonton	Innisfail	Ponoka	Winnipeg
Lloydminster	Medicine Hat	Portage la Prairie	" North
		Red Deer	

ONTARIO AND QUEBEC:

Ayr	Dundas	Ottawa	Stratford
Barrie	Dunnville	Paris	Strathroy
Belleville	Fort Frances	Parkhill	Toronto, 8 offices
Berlin	Galt	Peterboro'	Toronto Junction
Blenheim	Goderich	Port Perry	Walkerton
Brantford	Guelph	St Catharines	Walkerville
Cayuga	Hamilton	Sarnia	Waterloo
Chatham	London	Sault Ste Marie	Warton
Collingwood	Montreal	Seaford	Windsor
Dresden	Orangeville	Simcoe	Woodstock

MARITIME PROVINCES:

Amherst	Canning	New Glasgow	Springhill
Antigonish	Halifax	Parrsboro'	Sydney
Barrington	Lockeport	Sackville	Truro
Bridgewater	Lunenburg	St John	Windsor
	Middleton	Shelburne	

IN THE UNITED STATES:

New York	Portland, Ore.	San Francisco.
Seattle, Wash.	Skagway, Alaska	

LONDON, ENGLAND, OFFICE: 60 LOMBARD ST., E.C.

A general banking business transacted. Foreign exchange bought and sold

CAPITAL PAID UP, - - \$1,000,000.
 RESERVE FUND, - - 1,000,000.

THE METROPOLITAN BANK.

DIRECTORS

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 D. E. THOMPSON, Esq., K.C. His Honor W. MORTIMER CLARK, K.C.
 THOS. BRADSHAW, Esq.

HEAD OFFICE, - TORONTO.

W. D. ROSS, GENERAL MANAGER.

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BANKING
BUSINESS
TRANSACTION

SAVINGS DEPARTMENT

at all Branches.

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FINANCE AND INSURANCE

IN a compilation of the failures in Canada and the United States during the month of October, Canada, according to the report of R. G. Dun & Co., does not make as favorable a showing as her sister country. Commercial failures during October in the States numbered 888, involving liabilities of \$10,525,278. This is a striking improvement as compared with the corresponding month last year, when there were 1,086 defaults, with liabilities of \$18,387,567. In Canada there were 112 defaults for \$819,840, comparing with 85 failures and \$747,312 liabilities last year, while the increase is still more striking when the comparison is carried back still further, for liabilities were only \$502,183 in 1902 and \$594,070 in 1901. This year's record is good as to manufacturing failures, 24 for \$114,436 comparing with 20 for \$474,248 last year, when two large saw mills and one mine defaulted for a heavy amount. Trading failures numbered 85, with liabilities of \$547,963, against only 62 defaults for \$269,476 a year ago. Last month's total was swelled by a large hardware suspension, and the losses in general stores were exceptionally heavy. Other commercial failures numbered only three, but provided \$157,441 liabilities, owing to the suspension of a stock broker in Nova Scotia. Last year there were also three suspensions in this class, but the amount involved was only \$3,588.

ANOTHER satisfactory half-yearly report has been issued by the Sovereign Bank of Canada. The statement shows an increase as compared with a year ago of \$2,800,000 in deposits, \$2,300,000 in loans and discounts; an increase of \$600,000 in cash and bank balances, or 100 per cent., and an increase in total assets of \$3,000,000. The report states that the circulation of the bank is practically up to the legal limit, and the figures generally represent an unprecedented growth, which not only reflects credit on the management of the Sovereign Bank, but is an evidence of the prosperity of the country. The bank shows \$3,375,000 of immediately available assets, or over 50 per cent. of its liability to depositors. The whole showing is a credit to the directors and management and must be very satisfactory to the shareholders of the Sovereign Bank.

ON January 1 the First National Bank of Chicago will put into operation a new scheme of bank management, the working out of which will be watched with keen interest by bankers. The scheme contemplates the specialization of the various large branches of trade represented by its deposit item. Under the new system the various lines of business will be divided in the bank's classification into groups and divisions. There are to be seven groups and twenty-six divisions. One group will include such divisions as collateral stocks and bonds, grain, flour and feed, meat products, leather, wool, live stock commission and coal. Another group will include dry goods and all branches of the clothing trade, and still another will take in agricultural implements, iron and steel products, lumber and furniture and manufacturing sundries. The customers of the bank will be classified according to this grouping of the lines of business they follow. Under the present system the customers of

the bank are classified in an arbitrary alphabetical way. The main object in making the change is to minimize the bank's losses. The second is to increase its business. There will be a departmental system for handling the business of its customers with a view to making the official staff a group of specialists in the various lines of trade and industry that are followed by people who do business with the institution.

MOLSONS BANK annual statement is a satisfactory one. The net profits for the year were \$457,290.72, affording dividends as usual, at 9 per cent. and \$150,000 for the reserve fund, which is now equal to the whole paid-up capital of \$3,000,000. Next year the Molsons Bank will reach its 50th anniversary. Its record in all the time of its existence has been one of conservative and careful management and sustained well doing for its shareholders.

NOTES.

A rumor has gained currency that the Metropolitan Bank of Toronto, the People's Bank of Halifax, the People's Bank of New Brunswick and a Prince Edward Island bank will amalgamate under the name of the Alliance Bank of Canada, with a capital of \$5,000,000.

The Standard Loan Company, of Toronto, has absorbed the Huron and Bruce Loan and Investment Company, the head offices of which are at Goderich, Ont. During the past year the Standard has effected amalgamation with two other companies, the Aids Savings and Loan Company, and the Ontario Loan and Investment Company, Limited, both of Toronto.

At its meeting in Toronto on November 11 the Canadian Bankers' Association re-elected the following executive:—President, E. S. Clouston, of Montreal; vice-presidents, Duncan Coulson, Toronto; Geo. Burns, Ottawa; H. Stikeman, Montreal; M. J. A. Prendergast, Montreal. Council: B. E. Walker, Toronto; Thomas Fyshe, Montreal; D. R. Wilkie, Toronto; Thos. McDougall, Quebec; James McKinnon, Sherbrooke; W. E. Staven, St. John, N.B.; G. N. Balfour, Quebec; P. A. Lafrance, Quebec; S. P. Reid, Toronto; T. G. Brough, Toronto; E. L. Pease, Halifax; D. R. Clarke, Halifax; H. S. Strathy, Toronto.

ESTABLISHED 1874

JOS. B. REED & SONS

Insurance, Toronto

ADVANCED METHODS

Our Insurer's Advice Sheet system.
 " " Safe Deposit Vault.
 " " Bond (guaranteeing our work)
 Free of cost to our customers.

ABSOLUTE SECURITY

We represent the strongest and best companies in existence.

Write for our pamphlet illustrating the superior advantages of our office and methods.

ELECTRICAL GOODS AND SUPPLIES

Handy Telephone.

A GOOD telephone that is perfectly reliable, works well, and at the same time is cheap, has long been wanted. A new line has been placed on the market, consisting of a pair of telephones known as "Phonophones." These phones are not a cheap toy, but are practical and work satisfactorily. They are not made in Canada, but are the product of one of the largest European factories and have long passed the experimental stage. They are apparently just what are required to fill a long felt want where communications for distances up to 2,000 feet are required. The illustration gives a very fair idea of what the article is.

There is shown in the illustration one telephone connected with a push button, which can signal the other end, which has no push button. They are packed two in a box without wire bells or batteries, the price being given simply for the telephones. The accessories comprise one bell, two batteries, with the required number of feet of common annunciator wire, which can easily be determined from the diagram showing connections. If the system shown will not answer all purposes, and it is required to signal from both ends, then it will be necessary to instal two bells instead of one, and an extra push button. These phonophones are very simple to instal, and being packed in such a light and attractive manner command a very large and ready sale at \$3.75 per pair.

The cost of the bells and batteries is not excessive, the bells being sold at 30 cents each, and the batteries at 20 cents each. It is claimed that this is a very good battery, but a better one can be obtained for 40 cents. The push button would cost 10 cents each. The wire costs about 35 cents per pound, and usually No. 18 Brown & Sharpe gauge is used for short distances, up to say one or two hundred feet, and this wire would run about approximately 170 feet to the pound.

The following suggestions are offered as to the many places in which these phonophones can be used to advantage: In the house, from the sitting or other rooms to the kitchen. It is just the

thing for the farmer, to communicate from the house to the barn, or down to the farm, to save him time and many a

his guest rooms to the office—from the dining room to the bar. The above few suggestions will enable the dealer to find

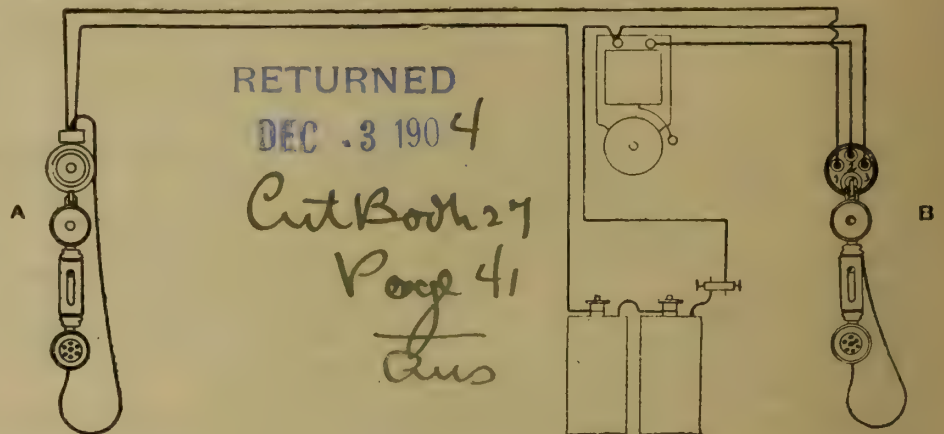


Diagram of Connections.

weary step. The merchant need not be told of the many places where he can

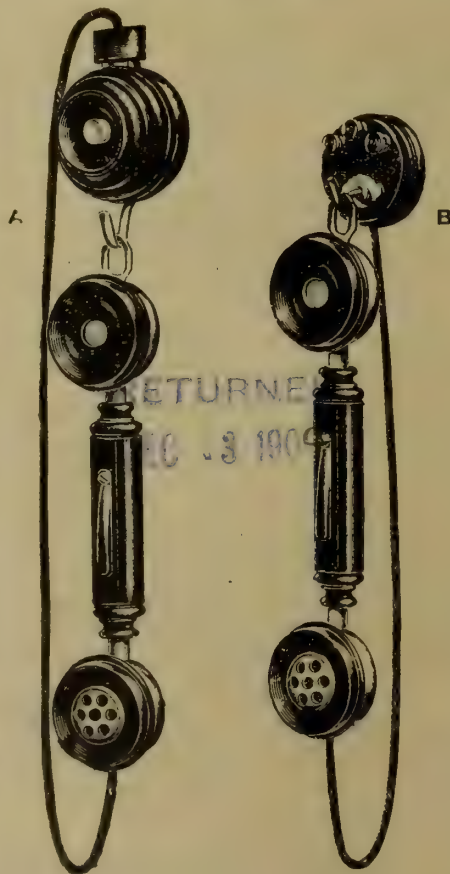
other reasons to offer his customers for the purchase of these excellent little phones. They are thoroughly guaranteed in every respect, and must not be confounded with similar devices of a cheaper nature which have been placed on the market in the past, which do not have the guarantee which these carry with them. Munderloh & Co., of Montreal, carry these phonophones in stock and can make prompt shipments.

Brooklyn Trains All Electric.

No steam locomotives are now running on the Brooklyn elevated railway. Recently, and for the first time in its history, all the steam locomotives were called in and the system is now being run entirely by electric locomotives.

Lighting Cigars by Electricity.

A new form of lighting cigars has recently been adopted, which consists of an electric apparatus containing a pair of carbon pencils, between which an arc is struck when the smoker wishes to light his cigar. The apparatus consists of a metal box, perforated and mounted upon a standard, and supplied with a hundred and ten volt direct current from the Edison lighting mains. Inside the box the two carbon pencils are brought in contact by the depression of a thumb piece, or button on the outside, and then separated by spring mechanism,



install them to great advantage. The hotel man has use for them to communicate from the office to the stable—from

We make Electric Fixtures, Sockets and Cut-Outs

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

which holds the carbons just far enough apart for an arc to be formed. By inserting a cigar in an orifice in the front, the unlighted end of the weed becomes ignited by contact with the arc, the whole operation taking scarcely five seconds.

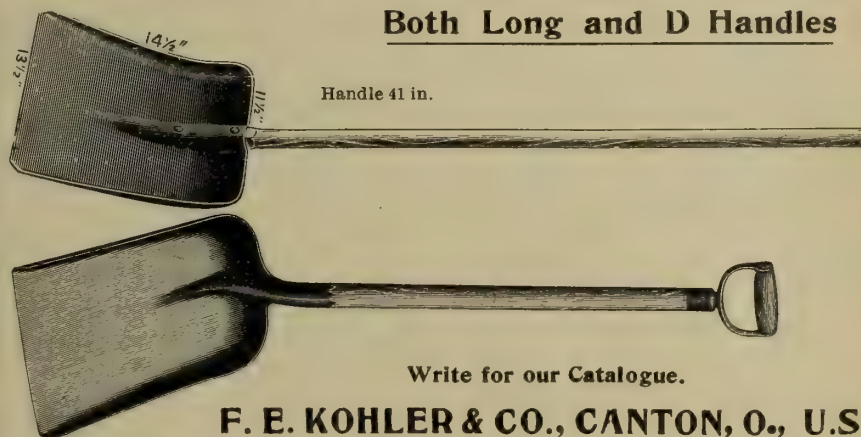
Electric Clock.

A NEW electric clock has just been made in England which is a combination of the ordinary type of clock-work with an electrically operated mechanism which keeps the clock continually wound up. A soft iron pivoted armature swings between the pole pieces of the two electro magnets and when attracted by the latter assumes a horizontal position, thus stretching a spiral spring. The tension of the spring drives the whole clock work through a pawl attached to the armature, engaging with a ratchet wheel connected with the gear train of the clock. As the clock runs the armature is more and more deflected from the horizontal. When this deflection has reached a predetermined value a curved impulse is sent through the magnets by a special device and the armature is again driven back into the horizontal position. To insure continuity during the fraction of a second occupied by this action, the clock movement is driven by a second small spring which is put under tension by the movement of the armature itself. Two dry batteries are generally employed for furnishing the current.

The Quebec Electric Co. is about to let contracts for the construction of a large water power plant at St. Anne's and Seven Falls. The construction of the dams, masonry and the foundation work, in common with the power house, is to be commenced without delay. The two falls will develop at low water between 22,000 and 25,000 horse-power.

SNOW SHOVELS, FURNACE SCOOPS

Both Long and D Handles



Write for our Catalogue.

F. E. KOHLER & CO., CANTON, O., U.S.A.

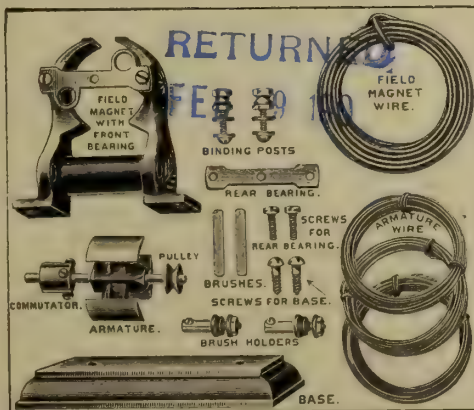
The Best HOT WATER BOILER Made.

The Economical HOT WATER BOILER

is made on new principles, which shortens the time required for heating the water and keeps the fire from dying out through chilling.

Booklet tells all about it.
Send for it. Agents wanted.

P. GIES, Founder, BERLIN, ONT.



Everything Electrical.

SEND FOR NO. 20 NOVELTY CAT. FREE.

The Sayer Electric Co'y, MONTREAL



Toy Motors

in parts ready to assemble and others ready to use. If you want anything in this line write to

10-14 Beaver Hall Hill

Business Changes

ONTARIO.

A. McKillop, agricultural implement dealer, Rodney, is dead.

Canada Metal Co., Toronto, have suffered slight loss by fire.

Geo. B. Girdle, harness merchant, Brockville, has sold out.

W. A. Murkar, Tottenham, has sold his foundry to Geo. Gordon.

The assets of Jos. Bertrand, blacksmith, Rockland, are to be sold.

Geo. Brimstin Co., cutlery merchants, Toronto, suffered small loss by fire.

Wm. McDougall, harness merchant, Gore Bay, has sold to R. R. Gamey.

Geo. W. Copeland, dealer in agricultural implements, Aylmer, has sold to C. W. Firby.

John Hillock, of the John Hillock & Co., manufacturers of refrigerators, Toronto, is dead.

J. H. Edmunds & Co., metal spinners, Toronto, have suffered loss to premises by fire.

Joseph Potts & Son, hardware and tinware merchants, Dorchester Station, have sold to Purdon-Gillespie Hardware Co.

QUEBEC.

Narcisse Gauthier has registered with Vian, Thade & Co., contractors, Montreal.

Brunet & Desjardins, brick manufacturers, Montreal, are offering to compromise.

A. Desmarteau has been appointed curator to Geo. Lapointe & Co., contractors, Montreal.

The assets of the La Macaza Timber and Lumber Co., La Macaza, were sold on December 2.

C. Seanlan, plumber, Montreal, has assigned to Kent & Turcotte; assets sold on December 2.

A. Denis and A. Dube have registered under the style of Arthur Denis & Cie., plumbers, Montreal.

Andre Bray and Arthur Bastin have registered under the style of A. Bray & Cie., contractors, Montreal.

F. X. Bilodeau has been appointed curator to the Maisonneuve Engine Works, Montreal (Maisonneuve).

Alfred Collyer and G. N. Brock have registered under the style of Collyer & Brock, electric contractors, Montreal.

A. M. Stewart, J. C. Stewart and John Stewart have registered under the style

of James Stewart & Co., contractors, St. Johns.

A. Desrochers & Cie., lumber merchants, Quebec, have dissolved; Anseline Desrochers continues under old style.

Idola Fournier and Jean Baptiste Pelletier have registered under the style of Fournier & Pelletier, sash and door manufacturers, Montreal.

Francois Meunier and Pierre Aumais dit Francoeur have registered under the style of Meunier & Francoeur, sash and door manufacturers, Montreal (St. Louis).

NOVA SCOTIA.

N. J. Sutherland, contractor, Sydney, has assigned book debts and accounts to the Bank of Montreal.

MANITOBA AND N.W.T.

Cunningham Electric Co., Edmonton, have dissolved partnership.

Northwest Machinery and Iron Co., Winnipeg, have been burned out.

McConnell & Lawton, agricultural implement dealers, Hamiota, have sold Crandell branch to Hamilton Bros.

The stock of W. J. Maxwell, tinsmith, Winnipeg, has been sold by bailiff.

Content & McTaggart, lumber merchants Content, have dissolved. H. McTaggart continuing.

The assets of R. J. Stewart, lumber merchant, Holland, have been sold to satisfy the debtors.

Hamelin Bros & Co., hardware merchants, Creelman, have sold to Moose Mountain Lumber and Hardware Co.

TRAVELERS SHOULD HAVE A HOLIDAY.

With the holiday season approaching and travelers' sales becoming smaller, it is suggested that they be taken off the road from Dec. 1 to Jan. 1. Employers would be money in pocket and merchants would have an opportunity to mark off holiday goods and make other preparations for disposing of large Christmas stocks.

Travelers require a rest as well as merchants. In any event it is a question whether money is made in the long run by an extra exertion on the part of travelers during the month of December. Certain firms have come to realize this and accordingly have printed notices and placards to the effect that travelers will not be interviewed unless specially sent for.

The writer is in hopes that firms employing large staffs of travelers will act immediately in this matter.

(Signed),

TRAVELER.

USEFUL REVOLVER GRIP.

READERS of Hardware and Metal will doubtless be interested in the Iver Johnson Revolver Grip, herewith illustrated, a recent invention that has met with spontaneous favor and a demand which keeps the Iver Johnson armories on the jump to satisfy the immediate requirements of the trade.

Heretofore, to obtain a strong, firm grip on a revolver, it has been necessary to design the weapon with a long sweep of the handle with its disadvantages of weight and cumbersomeness. The Iver Johnson Revolver Grip is not only light but detachable and its use, therefore, is optional with the user. There are occasions where circumstances demand unusual accuracy and when one's life almost depends on an unfailing and absolute grip on his revolver. Having in mind this contingency, and also the very common occurrence of a revolver being knocked from the hands of the holder, or being wrenched from the hands by



Revolver Grip.

superior strength, at the very moment it is most required for defence, the inventor conceived the idea of the Iver Johnson Revolver Grip.

The device is furnished on the regular Iver Johnson Automatic and I. J. 1900 Double Action revolvers, at a slight additional cost, but will only be sold as an integral part of the same. In other words, it is made and formed to fit the Iver Johnson product only, and is not for sale separately or detached, or in connection with any other make.

The manufacturers, the Iver Johnson's Arms and Cycle Works, of Fitchburg, Mass., will be pleased to furnish further particulars to any one who may be sufficiently interested to address them on the subject, mentioning Hardware and Metal.

AGENCY WANTED.

P. B. Birony, of 40 Dearborn street, Chicago, writes that he is in a position to represent a good Canadian manufacturer of hardware goods.

PERSONAL AND TRADE NOTES.

Mr. J. F. Frame, hardware merchant, Virden, Manitoba, was in Collingwood this week.

W. H. Turnbull & Son, Brantford, will soon open a branch house at Scotland, Ont.

Mr. A. B. Cowan, president of Cowan & Co., Limited, machinery manufacturers of Galt, Ont., is visiting Vancouver.

Mr. W. C. McFarland, hardware merchant, 391 Parliament street, Toronto, took in the close of the World's Fair this week.

There is some likelihood of the Hardware Specialty Co., of Aurora, Ill., establishing a Canadian branch at Dresden, Ont.

Mr. C. Bigham, formerly salesman in the retail department of Rice Lewis & Son, Toronto, is now traveling for the firm in Eastern Ontario.

The Canadian Rubber Co., of Montreal, have opened a branch office in Halifax, under the management of Mr. Lloyd L. Libby, recently of Montreal.

Lewis Bros. & Co., wholesale hardware merchants of Montreal, have taken out a permit for a new warehouse at No. 8 Bleury street, costing \$100,000.

Mr. J. N. Kennedy, office manager of the Noxon Co., implement manufacturers, Ingersoll, was on Nov. 21 married to Miss Edith Stokes, of Woodstock.

Mr. F. H. Whitton, of the Ontario Tack Co., Hamilton, has been appointed by the Canadian Manufacturers' Association as a member of the permanent committee on insurance.

The officers of the Canadian Westinghouse Co. and Westinghouse, Church, Kerr & Co., of Hamilton, held a banquet at the Hotel Royal on November 24, in honor of the American Thanksgiving Day.

H. S. Howland, Sons & Co., Limited, Toronto, have this week moved from their temporary quarters in the Parkdale Curling Club Rink to their new building on Front street west. However, the building is by no means completely furnished, and consequently the showrooms are not as yet fitted up. The general offices are in the rear of the first floor of the building, but the sales office is for the present at the office on York street.

Among those who called on the wholesale trade of Toronto this week were Messrs. F. Childs, hardware merchant, Gravenhurst; H. Jones, of Jones & Co., Hamilton; R. Saxby, superintendent of the water and light commission, Whitby; G. Ellicott, plumber, Hamilton; A. J. Ross, plumber, Owen Sound; J. E. Farrell, plumber, Sault Ste. Marie; A. Rodgers, plumber, Hamilton; Mr. Brown, of Brown & Semple, Brockville; Mr. Scott, of Scott & Murphy, Mount Forest; J. H. Ling, plumber, Barrie; and Thos. Phillips, plumber, Orillia.

INQUIRIES FOR CANADIAN TRADE.

The names and addresses of the firms making the following inquiries may be had by application to the Department of Trade and Commerce, Ottawa, or to the Editor of this paper. Parties answering inquiries will be careful to mention the office under which said inquiry appears and the number.

The following inquiry concerning Canadian trade has been received from Manchester, Eng.:

67. Manchester firms are desirous of obtaining from Canadian manufacturers of office filing cabinets and specialties, descriptive catalogues and price lists, also showing best trade discounts.

The following inquiry for Canadian trade has been received from the Commercial Agent, Japan:

23. A merchant in Japan wishes to correspond with Canadian importers of copper and rock sulphur, also iron pyrites. The same merchant would correspond with Canadian exporters of hides (dry) and waste pieces of hides, and leather clippings, chips of leather from shoe factories, harness shops, etc., of all kinds.

The following inquiries concerning Canadian trade have been received by the Department of Trade and Commerce, Ottawa:

44. Wanted, by a French dealer, names of Canadian wood and pulp shippers.

48. A French veneer manufacturer wants the names of like manufacturers in Canada.

52. A French manufacturer of electric and gas light apparatus wishes to be put into communication with a Canadian house wishing to push the sale of these apparatus in the Canadian market.

A \$9,000 FIRE.

On Saturday morning, November 26th, fire started in the smelting room of the Canada Metal Co., Toronto, and before it was extinguished caused considerable damage. After playing havoc with everything in the smelting room, with the exception of the furnaces, it ran through the stock rooms over the drive-way and entered the two top storeys of the main building. These two floors are used as stock rooms for scrap paper, but owing to the tightly packed condition of the paper, the fire did not affect it to any great extent. The building is being rapidly repaired and all orders are being filled with prompt attention. The loss is estimated at \$9,000, which is fully covered by insurance.

A CREDITABLE CATALOGUE.

Rice Lewis & Son, wholesale and retail hardware merchants, Toronto, have issued an illustrated Christmas catalogue of their most attractive lines. Copies may be had on application.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

AGENCY WANTED.

HARDWARE specialty agency for Winnipeg and the Territories; good connection; references; none but first-class firms considered. Apply Box 199, HARDWARE AND METAL, Toronto. (49)

BUSINESS CHANCES.

FOR SALE—Blacksmith tools and stock; shop to rent cheap; Air stand; bear inspection. R. H. Barber, Haysville.

HARDWARE STOCK—\$1,200—For sale at a low rate on the dollar. Box 448, Newmarket. f

HARDWARE BUSINESS FOR SALE—In a thriving town in Western Ontario. Satisfactory reasons for selling. Stock new and well bought amounting to say \$3,500, business well established with but one competitor. Apply, Box 197, HARDWARE AND METAL, Toronto. (50)

SITUATIONS WANTED.

TRAVELER in hardware, paints or stoves; long experience; good connection in Ontario; sober and reliable; open January 1st. Box 198, HARDWARE AND METAL, Toronto. (49)

MECHANICS WANTED.

AT ONCE—Carriage woodworker and painter combined; must be Air man. Wire J. A. Saunders, Streetsville. f

AT ONCE—Young man with one or two years' experience at horseshoeing. Apply Elliott Bros., Woodbridge. f

BLACKSMITH WANTED—At once—must be good horseshoer and capable of taking charge of shop. Apply to Wm. H. Wenzel, Crediton, Ont. f

BLACKSMITH—Horseshoeing and general; single preferred. M. Tamblin, Elizabethville. f

TINSMITH WANTED—Steady employment—state wages and experience. A. E. White, Dutton, Ont.

Successful Advertising—How to Accomplish It

By J. ANGUS MACDONALD—a volume of 400 pages packed full of good stuff for advertisers. Price \$2 00.

Sent postpaid upon receipt of price. TECHNICAL BOOK DEPARTMENT, MACLEAN PUBLISHING CO., LIMITED, TORONTO.

**"Silverware
that Sells."**



Get your Orders in Quick

Only 3 weeks until Christmas. Good roads, good times, and the season for gift buying. Silverware sells well all the year round, but particularly so now. And **STANDARD SILVER**, above all other makes, is best to sell—for its worthiness, its beautiful finish and designs. Its trade mark is an absolute guarantee of quality, serviceableness and value.

SEND US AN ORDER FOR ANY SUM OF MONEY YOU PLEASE,
AND LET US FILL IT ACCORDING TO OUR JUDGMENT.
WE GUARANTEE SATISFACTION. USUAL TERMS.

STANDARD SILVER CO., LIMITED
HAYTER STREET, TORONTO



RETURNED

DEC .3 1904

*Put Book
Page 43*

QUITA RANGE

A New, Light and Inexpensive Steel Range.

Burns Coal, Coke or Wood.

Has a three-piece expansion top, large drop broiler door, large end shelf, duplex grate which is reversible for coal or wood, large ash-pan, sectional leg base, interchangeable flush reservoir and a handsome high shelf.

The Quita, although a cheap range, has all the strong points of our better lines.

Burns Coal, Coke or Wood.

No.	Cooking Holes	Size of Oven, Ins.	Length of Wood Fire Box, Ins.	Shipping Weight, lbs.		Tel. Code	
				Sq.	Reser.	Sq.	Ext.
9	4 9-in.	16 x 21	21	240	250	Canoe	Camlet

The McClary Manufacturing Co.

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

"EVERYTHING FOR THE TINSHOP."

HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,

Montreal.

The MacLean Publishing Co. Limited

Publishers of Trade Newspapers which circulate in the Provinces of British Columbia, North-West Territories, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, P.E. Island and Newfoundland.

OFFICES

MONTREAL	- - -	232 McGill Street. Telephone Main 1255.
TORONTO	- - -	10 Front Street East. Telephone Main 2701.
WINNIPEG, MAN.	-	Room 515, McIntyre Block. Telephone 1846. F. R. Munro.
LONDON, ENG.	- -	88 Fleet Street, E.C. I. Meredith McKim. Telephone, Central 12960.
MANCHESTER, ENG.	-	92 Market Street. H. S. Ashburner.
ST. JOHN, N.B.	- -	No. 3 Market Wharf. J. Hunter White.
NEW YORK	-	Room 1241 New York Life Bldg. W. T. Robson.
VANCOUVER, B.C.	-	Geo. S. B. Perry.
ADELAIDE, AUSTRALIA	-	Steamships Building, W. H. Sharland, Jr.

Subscription, Canada and United States, \$2.00.
Great Britain and elsewhere 12s

Published every Saturday.

Cable Address { Adscript, London.
Adscript, Canada.

New Advertisements:

J. M. Mast Mfg. Co., Lititz, Pa.
Grove Chemical Co., Lancashire, Eng.

PROLONGING NAVIGATION.

HERETOFORE a serious drawback to the shipping interests of Canada and her commerce has been the forced closing of the Port of Montreal about the middle of November, just at a time of considerable commercial activity. Although during many seasons the river is open even until the first of the year, the uncertainty of climatic conditions has created an uneasiness that renders ship owners unwilling to take any risk, by having out-going boats in the harbor after that date. Any assurance that the ice would be broken, in case of necessity, would change the view point of shippers to a degree of confidence regarding later boats. There is every likelihood of this assurance being merited, as the Canadian Government has provided two ice-breakers, the Champlain and the Montcalm, the latter having arrived at Sydney from the Clyde only this week. They are built after the style of the well-known Russian ice-breaker, the Ermack, operating in the Baltic Sea. The result of their

operation is of unusual importance to the commerce of Canada.

A unique experiment is now under way, the outcome of which will be watched with the deepest interest in this country. It is none other than the sending of a coal boat up the St. Lawrence to Montreal after the 1st of December, to return when its cargo is discharged. The steamship St. Helen, with twelve hundred tons of soft coal, left Sydney early in the week and is being escorted from Quebec by the ice-breaker Champlain. Although the weather is not unusually cold at present, there is considerable frost, and it is conjectured that the Champlain will have ample opportunity of testing its worth before the St. Helen has cleared and is safely down stream past Quebec. The successful outcome of the experiment means that Fall navigation will be prolonged a month at least. If this is

NEW PRICES ON LINSEED OIL AND TURPENTINE.

As we go to press, the price of linseed oil and turpentine has changed, and present quotations are as follows:

Linseed Oil—Raw, 1 to 4 bbl's, 44c.; boiled, 47c.; 5 to 9 bbl's, raw, 43c.; boiled, 46c.; Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbl's 75c.; 2 to 4 bbl's, 74c, Toronto; 5 bbl's and over, f.o.b. point of shipment, net 30 days. For less quantities than barrels, 5c. per gallon extra will be added, and for 5 gallon packages, 50c., and 10 gallon packages 80c., will be charged.

effected it follows that the ice-breakers will be able to open up the river a month earlier than if it were left to nature, and by clearing a channel early will prevent ice jams and incidentally remove any danger of floods in the vicinity of the St. Lawrence.

Two months additional commerce to the Port of Montreal is worthy of more than a passing thought. Not only will the city be directly affected by the prolonged season of trade, but the whole of Canada westward. Another month will be granted for shipping grain and other produce from this Canadian port, and a month earlier than usual trade will resume activity. It is a little early to speculate until after the feasibility of the experiment has been proven beyond doubt. However, the prospects for suc-

cess in this direction are bright enough to discredit failure, so that it is safe to prophesy that Canada is about to benefit by what is possibly the greatest physical aid to her commerce that could be devised.

PURIFICATION OF DRINKING WATER.

AFTER several years of research work carried on in an unassuming way at the Bureau of Plant Industry at Washington, Dr. George T. Moore has discovered a simple method of purifying public drinking water, which should bring upon him a benediction from the entire civilized world. By it the terrible dread of typhoid and cholera from drinking water is entirely removed, and communities when threatened can avert the danger with little trouble. The remedy, up to the present, has been to boil the water, and this, as a general rule, people will not do. One of the noticeable features of this discovery is its simplicity and cheapness of application.

The new method is to dissolve common blue stone, or copper sulphate, in the water in the proportion of about one part in a million, and it is claimed that this is as deadly to the germ life as a concentrated solution, the effects of which are well known in that direction. It seems remarkable that an amount of copper indistinguishable by the human organism, either by appearance, taste or effect, should destroy all germ life and leave the water in a well, cistern or reservoir clear and healthful. Such is the claim, and results already obtained bear out the statement. The discovery was made while testing the copper sulphate on scum covered reservoirs, on which it acted in a wonderful way, clearing away the foulness and rendering the water sweet and wholesome within twenty-four hours.

While in Canada we are not troubled to any extent with foul smelling drinking water in Summer, we are subject to epidemics of typhoid in large towns and cities, which is universally traced to the drinking water supply. If such a simple method as dissolving a few pounds of copper sulphate in a reservoir will rid the water of the deadly typhoid germ, one of which will increase to a million in twenty-four hours, it is well worth being given serious consideration on the part of the authorities.

THE WESTERN ASSOCIATION.

IT is now four months since there was organized in Winnipeg the Western Retail Hardware and Stove Dealers' Association. Readers of *Hardware and Metal* are already well acquainted with the nature of that association and the objects which it has in view, and they will be pleased to learn that the spontaneous response to the request of the Executive for the enrolment of new members is considered very gratifying.

Last August the appointment of an organizer was considered at the first meeting of the association, but it was decided then that in the present state of the association's finances such a step was impracticable. President Lindsay and his associates on the Executive have therefore been obliged to content themselves with appealing to the members of the trade by circular letter, and it is gratifying to learn that the great interest and enthusiasm manifested by those present at the August meeting has been communicated to the trade throughout the west.

As is well understood among the trade, three other organizations subsidiary to the general western association were formed last August. These were the Manitoba Association, the Assiniboine and Saskatchewan Association and the Alberta Association. A member of any one of these local associations is also a member of the larger body which deals with matters pertaining to the trade throughout the whole west. Hardware merchants in Manitoba may become members of their own provincial organization and also of the general Western Association by making application and paying a fee of only five dollars to E. H. Johnson, of Brandon, who is treasurer of the Manitoba Association. As the territorial associations are not yet fully organized, hardware merchants in the Territories desiring to join the general Western Association should send their membership fee of two dollars to C. A. Baskerville, Drawer 122, Winnipeg, treasurer of that association.

As has been said, the response to the invitation of the Executive has been

gratifying, but there are still a number of hardware and stove dealers in the west who have not sent in their application for membership. It is to these merchants that this article is particularly addressed. We are thoroughly in sympathy with this movement as we believe that the best interests of all branches of the hardware trade in the west will be served by its success. Plainly, the permanent success of the organization must depend upon the numerical strength of its membership. An association weak in numbers will not be able to carry out the plans of its founders and it will be a disappointment to all concerned. Nothing short of a membership including every legitimate retailer of stoves and hardware in Manitoba and the Territories will satisfy the Executive.

And there is no reason why the Executive should be disappointed in their ambitious design, for the movement is one which should command the enthusiastic support of every probable member in Manitoba and the Territories. The aims of the association are well known. It is not intended to be an instrument of aggression, but of protection. It is intended in the first place to protect the retail hardware merchants against themselves. It is unnecessary to elaborate this idea, for every reader of *Hardware and Metal* has had experience in price cutting and knows its disastrous results. Every merchant blames his neighbor for this state of affairs, but single-handed he is unable to effect a remedy. The only remedy is an association which will arrange and maintain a schedule of prices on those staple commodities such as nails, white lead, building paper, etc., on which prices are most frequently cut. It is not proposed to raise prices to an unfair level, but to agree upon a reasonable profit and maintain it.

Any hardware merchant inclined to be skeptical as to the ability of an association to do this should inquire into the history of the local Winnipeg association which was formed three years ago. Prior to its organization price cut-

ting in staples was rampant in the city of Winnipeg, but its members have been loyal to their agreement with the result that a better profit has been obtained on staples.

These are only a few of the advantages of such an association. Others are obvious. There are difficulties in the way, of course, and *Hardware and Metal* is glad to open its columns to the trade for their discussion. Being strictly a trade newspaper it is possible in its columns to discuss such questions with the utmost frankness. All such communications should be addressed to our Winnipeg office, 515 McIntyre Block.

A WARNING TO THE TRADE.

IT does not often fall to the lot of *Hardware and Metal* to warn its readers against individuals seeking to prey upon legitimate trade. Such "sharpers" have been the exception so far in Canadian business circles, and in order that their existence even yet may be attended with a maximum of risk we lose no time in giving publicity to a case in point which has arisen in the Province of Quebec.

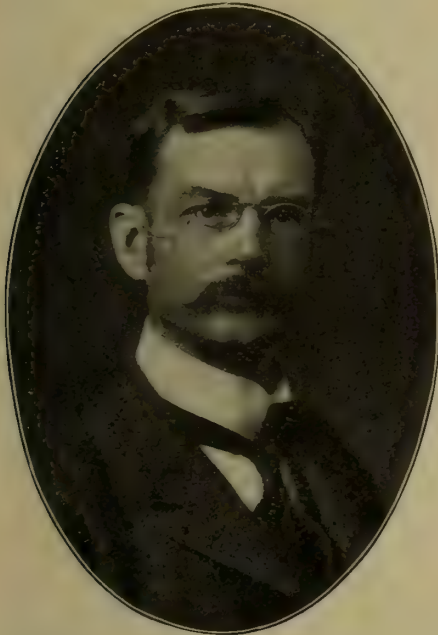
It is alleged that a man going by the name of McKenzie, under pretence of carrying on a general mercantile business in New Richmond, has for years been in the habit of ordering goods wherever credit was procurable, and of having the same shipped either to himself or his son. On arrival the goods are turned into a store under the management of Mrs. McKenzie. No one of the three is liable for a cent according to law, which makes it practically impossible for creditors to obtain justice or satisfaction once goods have been turned over into second hands.

Several claims have been filed but it has been found that the expense of taking proceedings and forcing the matter to an issue was greater than the claims would warrant. The attitude of wholesale houses that have been "gouged" seems to be to let the thing go by default, at the same time resolving not to be "gouged" again. It hardly seems fair, however, that the trade press of Canada should not seize the opportunity of giving publicity to a practice which if allowed to continue must be prejudicial to the trade and commerce of the nation.

Business Men in Parliament

H. B. Ames, M.P. for St. Antoine, Montreal.

IN the Parliament which will meet in January no more self-sacrificing and zealous worker for the country's weal will be found than Herbert B. Ames, who has been elected to represent the St. Antoine Division of Mont-



H. B. Ames, M.P.

real. Mr. Ames has for several years been closely identified with the reform movement in municipal politics in Montreal, and his services as alderman since 1898 will stand him in good stead at Ottawa.

Mr. Ames was born in Montreal in June, 1863, the son of the late E. F. Ames, who came to Montreal half a century ago and established what is now the important boot and shoe business of the Ames-Holden Co., employing 325 hands. Mr. Ames graduated from Amherst College in 1885, entering the employ of his father's firm in August of that year, where he rapidly gained a complete insight into the business.

Though still a director of the company and largely interested in its welfare, Mr. Ames has since 1893 devoted himself more particularly to the work of improving the tone of municipal politics in Montreal. He was actively interested in the Volunteer Electoral League, launched in 1892, and in 1898 he became an alderman for the St. Antoine ward.

In January, 1903, Mr. Ames was elected to the Council of the Board of Trade, a proof of the confidence the business men of Montreal place in his ability. As

a member of the board he had much to do with making the Chambers of Commerce Congress last Summer a success. This year he was enthusiastically received in Britain, when, in company with other Canadians, he returned the visit of the British delegates.

His interests extend in many directions. He is a director of the Great Western Life Insurance Co., and of the Dominion Guarantee Co. He is actively interested in the Y. M. C. A. and the Montreal Christian Endeavor Union. He is also a member of the Protestant section of the Quebec Council of Public Instruction, and a governor of the Montreal Dispensary.

STEEL RADIATORS.

MR. SAFFORD was in Toronto this week. Mr. Safford's name has become a household word in Canada owing to the widespread sale of the "Safford" radiator which he invented and patented a number of years ago.

In conversing with a representative of Hardware and Metal a Toronto gentleman said: "Oh, yes, I knew Mr. Safford well, but I never think of his name without thinking how foolish I was to refuse an offer he made me. I was working upstairs at Jim Morrison's when Mr. Safford came to me and offered me the management of a factory where 'Safford' radiators were to be manufactured. I could not see very far ahead then, for I refused. He then went to Jack Taylor, who was also working at Morrison's, and made him the offer. Jack accepted, and has succeeded well. He worked hard, and he's a fine fellow and he deserved to succeed."

"By the way, Taylor-Forbes are about to manufacture radiators?"

"Yes, and they'll make good ones. However, trade is good and I guess there'll be room for them."

"But I was going to tell you, Mr. Safford has been working on a new radiator for the last couple of years and now he's about ready to manufacture. He claims to have the coming radiator and I'm not just sure but what he's right. I only heard it to-day and I haven't had time to think the matter over yet. However it looks plausible on the surface. The radiators are to be made of pressed steel and can be turned out at about half the price of the cast iron radiators which are made to-day."

"But they wouldn't be able to put any ornamental work on them?"

"No, that's the chief objection I see to the new scheme. Of course the large

manufacturing establishments have theirs made plain anyway."

"How would they be for heat?"

"Oh, they'd be all right there. There is nothing better than steel pipes for radiating heat."

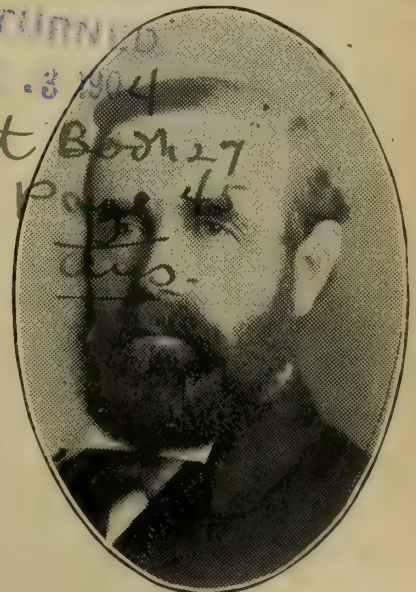
THE LATE JOHN BERTRAM.

ON Monday evening last there passed away in Toronto one of Canada's foremost industrial figures—Mr. John Bertram, president of the Collins Inlet Lumber Co., president of the Bertram Engine Works, and chairman of the Dominion Commission on Transportation.

Mr. Bertram was born in East Lothian, Scotland, on October 16, 1837, and came to Canada in 1860, settling in Peterboro. There he carried on a retail hardware business for eighteen years, eventually coming to Toronto and taking up both a wholesale and retail hardware trade for a few years.

Mr. Bertram has, however, for the past twenty-five years, been closely identified with the lumbering industry, and he was regarded as probably the best authority on forestry in Canada. In 1897 he became a member of the Ontario Forestry Commission.

His active interest in the engine and shipbuilding industry began in 1900,



The late John Bertram.

with the death of Mr. George H. Bertram, whom he succeeded as head of the Bertram Engine Works Co., retaining this position until his death.

A few years ago Mr. Bertram received the appointment of chairman of the Dominion Commission on Transportation.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Hardware.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Dec. 2, 1904.

STOCKTAKING is at present in full swing, with most of the wholesale trade, and their travelers are returning from the road to headquarters.

While this state of affairs upsets ordinary trade, it has not prevented their sending out a large quantity of goods, holiday lines in particular. The snow fall this week has had a beneficial effect, stimulating business considerably.

The demand for skates has been a remarkable one this season. The absence of snow in November allowing of good skating in the country districts, has called for many repeat orders, depleting jobbers' stocks almost entirely. Carpet sweepers, carver sets, cutlery, sewing machines, plated ware, shovels, sleigh bells and Winter sporting goods are among the other more active lines. There has been no re-adjustment either of the lantern or the wire nail situation, but both continue as before. There is no change whatever in prices.

Hockey Sticks and Pucks—The demand for these is now in full swing, as skating has commenced in earnest, and hockey clubs are being organized throughout the country. Quotations are as follows: Boys' hockey sticks, from \$1.50 a dozen up; men's, \$2.25 to \$3.50 a dozen; regulation pucks, \$2 a dozen; juvenile, \$1.15 a dozen.

Plated Ware—From all parts of the country larger orders than usual are being received for plated ware. We quote: Rogers 1847 goods, 45 per cent off list.

Cutlery and Scissors—A much larger demand than usual has been created in these lines, making them one of the most active at present. Quotations for case-carvers, from \$2 to \$10 per set; scissors in cases, 90c to \$2.

Skates—A record season prevails for skates of all kinds. Jobbers who ordered unusually heavy stock are almost entirely out of some lines, the reason for this being the open and frosty November which made splendid skating in the country districts. We quote: Halifax pattern, plain, 38 cents a pair; nickeled,

60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Axes—The main orders for axes are placed early in the season, but considerable business is now being done. We quote as follows: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—An active demand prevails. Our quotations are as follows: Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3 \$1.50 a dozen.

Carpet Sweepers—An unusually large number of carpet sweepers are in demand this season, to supply the holiday trade. The higher grades seem to be more called for at present than the others. Quotations are the same as before, \$21 to \$31 a dozen.

Sewing Machines—A remarkable activity continues in sewing machines, each succeeding week seeing more orders placed. Our quotations are as follows: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Food Choppers—Merely a nominal demand exists, which at this season of the year is rather expected. We quote: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Lanterns—No change has taken place in the lantern market within the week. Manufacturers seem no more anxious to come to any settlement regarding prices, so that cutting is being indulged in wholesale. As mentioned before, there is considerable shading even on the lower prices quoted. Quotations are: Cold Blast, \$6; No. 0 Safety, \$4 a dozen.

Sleighbells—A slight fall of snow within the past week has stimulated the market for sleighbells considerably. The season has already been good, but the advent of snow has created much more

activity. We quote as follows: Brass team bells, rough, \$1.80 to \$4.50 a doz.; polished, \$2.10 to \$5 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—In common with sleighbells, the shovel market experienced a boom within the past week. So many orders were received by jobbers that they experienced considerable difficulty in filling them. We quote: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent discount; Victor, wood, 35 per cent discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Heavy Screw Hooks and Hinges—A slight scarcity still exists, with a quiet market. Our quotations are as follows: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—Very little demand. Quotations are as before, \$2.25 per 100 lbs.

Barb Wire—While few orders are being received for future delivery, there is very little moving to supply present demand. We quote as follows: \$2.75 per 100 lbs. f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Fence Staples—The market is very quiet. We quote: \$2.65 per 100 lbs. keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Galvanized Wire—There is scarcely any business doing. Our quotations are as follows: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.56. In carlots f.o.b. Cleveland, Nos. 6, 7 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

Rivets and Burrs—There is an upward tendency in this market, with little activity. Discounts are as follows:

Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—No advance has as yet been made in screws, although it was rumored that an advance was likely to take place. There is no definite shortage, but supplies are not large. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—Much less activity prevails in bolts and nuts than a week ago. The market is strong with an upward tendency. Our quotations are as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; black bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Wire Nails—As mentioned a week ago, the meeting held by those representing the wire nail interests seems to have brought about little result, although there is a feeling now that there will be less shading of prices. No quotations are given.

Cut Nails—Beyond a nominal demand, there is very little being done in cut nails this week, and no desire on the part of jobbers to stimulate any demand. We quote as before, \$2.30 per keg, f.o.b. Montreal, Toronto, Hamilton, St. John.

Horseshoes—The demand for horseshoes while still fairly good has fallen off considerably with the close of navigation. Our quotations are as follows: "P. B." new pattern, base price \$3.50 per 100 lbs; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larg-

er, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—While fairly active, there is much less demand than a week ago. We quote list price as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22s; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. "P.B." brand, 55 and 60 per cent. off list. Other brands, 55 and 60 per cent. off list.

Sporting Goods—The first fall of snow usually sees a quickened demand for sporting goods, particularly in shot and ammunition. The market has been very brisk within the past week. Prices on shot guns and rifles remain the same and are to be had on application. On ammunition and shot our quotations are: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand. Standard shot \$6.50 per hundred pounds; chilled, \$7 per 100 lbs.; buck and seal \$7.50 per 100 lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—Orders for building paper have fallen off very materially. While the market was fairly active recently, it can hardly be termed so at present. Our quotations are as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Cordage—Further advances are reported on raw material in the cordage market and advanced quotations may be looked for. The market is rather dull and no great amount of business is expected until orders for binder twine are being placed. Quotations are as follows: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope,

3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c, for 3 and 4-ply bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Cement and Firebrick—The close of navigation and the arrival of snow have caused an almost entire falling off in the demand for cement, which has been none too brisk for some time past. We quote: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—The market is rather weak and the demand very slight. Our quotations are as follows: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3, one inch, \$2.95.

METALS.

The metal market at this centre is in a satisfactory condition. The different lines are active and considerable movement is taking place, with a bright tone prevailing. Prices are steadily advancing, with several higher quotations and a further upward tendency. Pig iron is quoted higher and a large amount of stock is being shipped. In sheets there is some activity for sugaring operations in the Spring. Tin plates are firmer, and ingot tin has advanced. Higher quotations are given on ingot copper, sheet and ingot zinc, and pig lead. The scrap metal market is brighter, and in copper and brass for export there is more activity than usual.

Pig Iron—The pig iron market is more active than a week ago. Advanced quotations are noted on Summerlee, Clarence No. 1, Clarence No. 3, and No. Q Cleveland, of \$1 a ton. Quotations are:

"Disc," No. 1.....	\$16.50 delivered Montreal.
"Dom," No. 1.....	17.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Glengarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.50 delivered Montreal.
" (special).....	18.50 " "
Ayresome No. 1.....	18.00 " "
" No. 3.....	17.50 " "
Summerlee.....	19.50 " "
Clarence No. 1.....	18.00 " "
" No. 3.....	17.50 " "
No. 1 Cleveland....	18.00 " "

Bar Iron—No further advance is noted in bar iron this week. The close of navigation has seen quite a falling off in the demand, but as yet the market is active. We quote: Merchants' bar, \$1.77 1-2; horseshoe iron, \$2.02 1-2;

forged iron, \$2.02 1-2, net cash thirty days.

Tool Steel—A fair demand exists for tool steel this week, with prices the same as before. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 71-4c; Conqueror High Speed steel, 60c.

Merchant Steel—The market is firm, but the advanced price quoted a fortnight ago still prevails. A moderate demand exists. We quote: Sleighshoe, \$1.82 1-2; tire, \$1.92 1-2; spring, \$2.75; toealk, \$2.42 1-2; machinery (iron finish), \$2.02 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.82 1-2; rivet, \$1.82 1-2; net cash thirty days.

Cold Rolled Shafting—Industrial activity throughout the country is creating a good demand for cold rolled shafting. Our quotations are as follows: Cold rolled shafting, 3-4 in., to 17-16, \$3.85 per hundred lbs; inch and a half to 3 inch, \$3.50 per hundred lbs.

Canada Plates—The quotations at present given for Canada plates have ruled for some time, but no further orders are being accepted at these prices. Our quotations are as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—Some orders are being received for Spring delivery, but there is little movement for present consumption. Quotations are as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—Local quotations remain as before, but in view of recent advances in the British market, a near advance is anticipated. There is a fairly good demand. Our quotations are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Antimony—The market is very stiff, with a moderate demand. The price

quoted last week, which was an advance of a cent and a quarter over the former quotations, still holds. The price is 91-4 to 91-2c.

Sheet Zinc—A further advance is noted in sheet zinc this week in sympathy with recent material advances on the British market. We quote: Case lots, \$6.75 to \$7; small quantities, \$7 upward.

Tin Plates—There is a fair activity in tin plates this week, with a firmer market but no higher quotations are given. We quote as before: Cokes, \$3.75; charcoal, \$4.

Ingot Tin—Another advance has taken place in ingot tin this week, of a half cent a pound. The market is very active. We quote: 32 1-2 to 33c, with no shading whatever.

Ingot Copper—Copper is one of the striking features of the metal market at present. The recent sensational advances are believed to be due to a corner on the copper market, the entire output being in the hands of a few. We quote still higher prices this week, being an advance of a quarter of a cent a pound over last week's quotations. They are 16c to 16 1-4c, the former price being for quantities only.

Ingot Zinc—Although the ingot zinc market has been advancing steadily for some time and higher quotations given repeatedly, the market is still higher, and we quote a quarter of a cent advance on former quotations. Quotations are 61-2 to 63-4c, the former being firmly held and for quantities only.

Pig Lead—Pig lead has advanced recently until the highest price reached for considerable time has been attained. There is a large demand. We quote advanced prices this week, being \$3.75 to \$3.85, no concessions being obtainable on the former price.

Boiler Tubes—As mentioned a week ago, there is considerable activity in boiler tubes, this being due in a great measure to the industrial conditions which are creating new works and extending others already established. Our quotations are as follows: Highest grade soft steel British and American tubes, one and a half inch, 71-2c; 2 in., 81-2c; 2 1-2 in., 10c; 3 in., 121-4c; 3 1-2 in., 16c; 4 in., 20c; 5 in., 45c. Price per foot net.

Scrap Metal and Old Material—A considerably better feeling is experienced in the scrap metal market this week. There is more activity in iron, and in brass and copper for export there is

considerable business being done. Brass and copper are firmer, but former prices are maintained. Old rags are moving well. In rubbers there is not much being done as dealers are holding their stocks in anticipation of a near rise in prices. Quotations are as follows: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 21-4c; zinc, 23-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 51-2c.

ONTARIO MARKETS.

Hardware.

Office of HARDWARE AND METAL,
10 Front street east.

Toronto, Dec. 2, 1904

THE only changes in quotations on the market this week are those in barb wire and woodenware. The price of wire has been advanced by the United States Steel and Wire Co., and as a consequence the price of barb wire on the local market has been advanced 5 cents. The prices now ruling are \$2.30 f.o.b. Cleveland, and \$2.20 for car lots of 15 tons f.o.b. Cleveland. As was anticipated two weeks ago, there has been a change in the price of clothespins. The change is a general reduction, 2 cents on .5 gross cases (full count), 5 cents on 4 dozen packages (12 to case) and 8 cents on 6 dozen packages (12 to case).

Other than these changes the market is quite steady and the volume of business keeps up well. Of course the nearness of the holiday season given an impetus to trade in all Christmas lines. The demand for all Winter lines is also very good. There seems to be an active demand for horseshoes, including Winter shoes, and also horseshoe nails. The activity in rivets, burrs, bolts and nuts continues. The volume of business in screws also continues large. A fair demand for ammunition continues, the lines selling best being filled shells and small size cartridges.

On the whole there is an active, steady tone to the market.

Lawn Mowers—The trade is interested and orders are already coming in. Prices for 1905 are as follows: "Woodyatt" 10 1-2 inch wheel, \$8.50 to \$11; "Star" 9 inch wheel, \$6 to \$6.50; "Daisy" 8 inch wheel, \$5.25 to \$5.75; "Philadelphia" 7 1-2 inch wheel, \$6 to \$7.50; "King Edward" 8 inch

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wheel, \$9 to \$10; "Woodyatt" 10 1-2 inch wheel, ball bearing, \$13.25 to \$18; grass boxes, \$1.75 to \$2. Discount 50 per cent. with freight concessions in quantity shipments.

Guns and Ammunition—There is no longer a demand for ammunition for deer shooting, but a very fair demand still continues for filled shells and cartridges, sizes 22 ad 30.

Washing Machines—Our quotations are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$25; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Chain—We quote as follows; 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Clothes Reels—The Davis (W. L. Co.), 40 per cent. off list.

Barb Wire—The price of barb wire has been advanced by the United States Steel and Wire Co., and as a consequence barb wire is now quoted 5 cents higher f.o.b. Cleveland. Changed quotations are as follows: \$2.80 per 100 lbs. f.o.b. Toronto and \$2.30 f.o.b. Cleveland; car lots of 15 tons, \$2.20 f.o.b. Cleveland.

Galvanized Wire—A fair business is being done at steady prices. We quote: No. 5, \$3.45; Nos. 6, 7, and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

Coiled Spring Wire—Inquiries continue regarding prices for next year. We quote as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—Still there is no change in the situation on the market. Although a meeting was held recently nothing very definite was decided on. An apparently fair quotation is about \$2.25 per keg f.o.b. Toronto, with car lots at \$2.20.

Cut Nails—There is still a fair business doing though prices are compara-

Tinned Sheets Tinplates Canada Plates Polished Sheets

ETC., ETC.

FROM STOCK OR FOR IMPORT.

A. C. LESLIE & CO.

509-512 Merchants Bank Building.

MONTREAL.

Ask your customers

if they don't need new pumps.

If they do, sell them our

Standard Anti-Freezing Pumps

They'll appreciate getting a pump that doesn't have to be thawed out every zero morning.

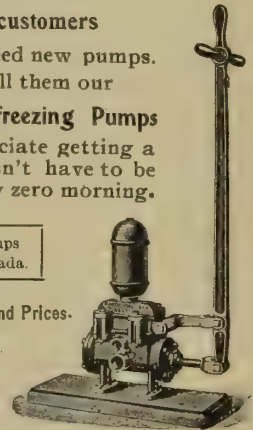
McDougall Pumps
—Made in Canada.

Write for Catalogue and Prices.

The

R. McDougall Co.
Limited

Galt, Ont.



"ALPHA" HIGH SPEED STEEL Crucible Cast Steel for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

SHEFFIELD, ENG.

Agents for Ontario:

BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

tively firm. We quote: \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—There is a very good trade being done in this line, there being a noticeable run on Winter shoes. Our quotations are as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—As a consequence of the good demand for shoes there is a good demand for horsenails. Quotations are unchanged: "C" brands, 40, 10 and 7 1-2 per cent.; "P.B." brands, 55 to 57 1-2 per cent.; other brands 55 and 57 1-2 per cent.

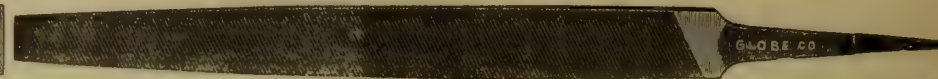
Screws—There is a considerable amount of business being done on this market. Prices are firm. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—There is a good trade being done, with prices firm at last week's quotations. We quote as follows: Iron rivets, 60 and 10 per cent. discount; iron burrs, 55 per cent.; copper rivets with usual proportion of burrs, 45 per cent.

Bolts and Nuts—The volume of business is very good, with steady prices. We quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

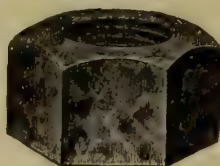
Woodenware—The changed quotations on clothespins have been given out this week, which are reduced somewhat from prices before prevailing. Quotations on 5 gross cases have dropped 2c, on 4-dozen packages 5c, and on 6-dozen packages 8c. Other quotations remain unchanged. We quote: Tubs, No. 0, \$11.25; No. 1, \$9; No. 2, \$8; No. 3, \$7;

NICHOLSON FILE CO., (Dominion Works) Port Hope, Ont. FILES and RASPS



WARRANTED
We manufacture 3,000 different styles and sizes. Daily production 600 dozen. Thirty-five years experience. Our files are sold by all prominent dealers throughout the Dominion.

WALTER GROSE, Selling Agent, Montreal



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs
Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.



Joker



Blizzard

TRAPS FOR RATS AND MICE

Swift as lightning, sure as death and sure death to the animal. Strong, simple, substantial construction. "To get the best trap trade, sell the best traps made."

Write for prices to

J. M. Mast Mfg. Co., Lititz, Penna.

Canadian Ag'ts. C. H. Grenfield & Co., London, Ont.



Snap Shot



Old Nick

TACKS

Factory equipped with the latest improved machinery.

Make inquiries
Get our prices

AGENTS WANTED

THOS. H. WYNN, - - HAMILTON

NOW IS THE TIME

TO PLACE YOUR ORDERS FOR OUR

DOOR & GATE WIRE SPRINGS

THESE ARE THE FINEST QUALITY OIL TEMPERED SPRINGS

QUALITY HIGH

PRICE LOWEST

SEND FOR CATALOGUE AND QUOTATIONS.

J. A. HENDERSON, MORCAN SPRING AND WIRE CO.

Board of Trade Building, MONTREAL

Sterne's Plastic Stove and Furnace Cement.

is a perfect article, and is guaranteed with a money-back-if-not-as-represented guarantee.

Send for circular and price list.

G. F. STERNE & SON, Sole Makers, Brantford, Ont.

J. H. HANSON, 422 St. Paul St., MONTREAL, Eastern Agent.

pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 70c; 6 dozen packages (12 to case), 87c.

Cordage—Business is being well booked up for rope and the jobbers are preparing for the binder twine trade for next season. Our quotations are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sashcord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2c to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 63-4c; white, 11 to 13c.

Building Paper—Trade is quieter, which is due to the lull in building circles. Prices continue unchanged. Our quotations are as follows: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lbs; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slater's felt, 60c per roll.

Firebrick—Since navigation has closed, the price of low grade American has advanced, and is now selling at from 25 to 30c. Other prices remain unchanged. Trade is brisk. We quote the following: English and Scotch firebrick 30 to 35c; American, low grade, 25 to 30c; high grade 32 1-2 to 40c.

Cement—Trade in cement is a little quieter. Prices continue unchanged. Our quotations are: For earlot orders f.o.b. Toronto, Canadian Portland, \$1.70; American Portland, \$1.70. For small orders ex warehouse: Canadian Portland, \$1.90 to \$2; American Portland \$1.90 to \$2.

METALS.

The strong metal market continues. On the United States markets further advances have been made in all lines of iron, and buying during the past couple of weeks has not been very extensive. The furnaces are for the most part pretty well sold up to the end of the year, and have numerous orders for delivery during the first three months of the coming year. The local market shows much the same condition as was exhibited last week. Orders for pig iron for delivery during the first of the year are being placed very freely now.

Canadian iron for immediate delivery is very scarce, and Midland cannot be had at all for immediate delivery.

There has been an advance on the local tin market of 1c to 2c per pound, caused by the advance on foreign markets, especially the British. Stocks of Canada plates are still very light. The copper market continues firm at last week's quotations, but not much business is being done. There is a very good run on lead at the advanced prices of last week.

Pig Iron—There has been a further advance on all kinds of iron on the American markets. Sales of pig iron have been somewhat lighter during the last two weeks. However, most of the furnaces are sold up to the end of the year, and have a very good-tonnage on their books for delivery during the first three months of the year. Canadian iron for delivery during the early part of the year is selling well. For immediate Canadian iron is very scarce, and Midland cannot be had. Quotations are as follows:

Middlesboro, f.o.b., Toronto.....	\$18 90
Hamilton, No. 1 ".....	to 18 00
" No. 2 ".....	to 17 50
" No. 1, Hamilton.....	17 00 to 17 30
Midland, No. 1 ".....	to 18 00
" No. 2 ".....	to 18 00
" No. 1 f.o.b. Midland.....	17 00 to 17 50
Radnor, f.o.b. furnaces.....	16 25 to 16 75
Londonderry, f.o.b. furnaces.....	27 50
	16 50 to 17 00

Bar Iron—Prices remain unchanged, and the active movement continues. Quotations are as follows \$1.80 f.o.b. Toronto, with discount of 2 per cent.; for extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tool Steel—We quote as follows: B. K. Morton & Co.'s "Alpha," high speed, 65c; "M" self-hardening, 50c; Standard, 9c to 14c; Jonas & Colver's "Novo," 65c; Wm. Jessop & Son's high speed, 60c; Standard, 14c; "Chas. Leonard," 8 to 9c; Crucible Steel Co.'s "Rex," high speed, 65 to 75c; self-hardening, 45 to 50c; special, 17c; Black Diamond, 10 to 11c; Sanderson's crucible steel, 8 to 9c; Superior, 12 to 13c. For more complete list see market quotations.

Tin—There has been an advance on this market of 1c to 2c per pound in consequence of the advance on the British and other foreign markets. Changed quotations are 32c and 34c per pound.

Galvanized Sheets—Prices are firm. A good business keeps up at the prices noted. Our quotations are as follows: Queen's Head, \$4.00 for 28



THIS SHOWS THE
"HALITUS"

THE FINEST VENTILATOR OR CHIMNEY COWL MADE.

It gives a positive upward draft under all conditions—can't get out of order—and exhausts more cubic feet of air per minute than any other ventilator. Made of Galvanized Steel or Sheet Copper.

The perfect simplicity and clever mechanical arrangement of the "HALITUS" will delight you, if you want a ventilator that really and perpetually ventilates. Read all about them in our catalog.

METALLIC ROOFING CO.,
Limited,
Wholesale Manufacturers,
TORONTO, CANADA.

gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.00 for 28 gauge; Gordon Crown, \$4 for 28 gauge.

Tin Plates—An excellent demand continues, with prices steady. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—Stocks of Canada plates are still light, and prices remain firm at last week's advance. There is a very good trade being done. We quote: All dull, \$2.40; half-polished, \$2.50; and all-bright, \$3.75.

Copper—Advanced prices are firmly maintained, but sales are somewhat light. Our quotations are: Ingot copper, \$14.75 to \$15 per 100 lbs; sheet copper, \$20 per 100 lbs.

Brass—The market is active and firmer than last week, discounts now being 10 per cent. instead of 15 per cent.

Lead—Prices are being maintained at the advance of last week, and sales are very good. Our quotations are: Pig lead, \$3.60 per 100 lbs; and bar lead \$3.60 per 100 lbs.

Zinc Spelter—There is a very good trade being done, with quotations firm at from 6 to 6 1-4c per lb. for foreign and 5 1-2 to 5 3-4c per lb. for domestic.

Old Material—There is a better inquiry for everything on the list. Better and larger supplies are arriving. During the week prices on "heavy copper and wire," and "light copper" have advanced. Prices are firm and a general advance is expected soon. Our quo-

Discount on these prices 40, 10, 7½ per cent., plus 15c. per box.

Cut Nails—

2d 1 in.....	\$4 00
3d Fin. 1½ in..	4 00
3d 1½ in.....	3 65
4d 1½ in.....	3 40
5d 1½ in.....	3 40
6d 2 in.....	3 30
8d 2½ in.....	3 15
10d 3 in.....	3 10
20d 4 in.....	3 05
30d 4½ in.....	3 00
40d 5 in.....	3 00
50d 5½ in.....	3 00
60d 6 in.....	3 00

Wire Nails—

1 in.....	4 00
1½ in.....	4 00
1½ in.....	3 65
1½ in.....	3 40
1½ in.....	3 40
2 ".....	3 30
2½ ".....	3 15
3 ".....	3 10
3½ ".....	3 05
4 ".....	3 05
4½ ".....	3 00
5 ".....	3 00
5½ ".....	3 00
6 ".....	3 00

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 65
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.....	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 10
gauge.....	4 10

Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Extra sheets, 36 in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.....	11
Imitation.....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05
Tinplate, IC charcoal, 20 x 28, box.....	9 50
" IX.....	11 50
" IXX.....	13 50

Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.....	3 00
Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	7 50
Broken lots.....	8 00
Pig lead, 100 lb.....	5 00
Black iron pipe, ½ inch.....	
" ¾ ".....	2 82
" 1 ".....	3 80
Black iron pipe, ¾ inch.....	4 20
" 1 ".....	5 25
" 1½ ".....	8 50
" 2 ".....	10 00
" 2 ".....	14 00

Rope, sisal, 7-16 and larger, basis.....	10 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrn.....	11 25
Solder.....	20

Axes, chopping.....	\$ 6 75 to 12 00
" double bits.....	12 00 to 18 00

Bluestone.....	5 25
Screws, flat head, iron, bright.....	85 and 10 p.c.

Round " ".....	80 p.c.
Flat " brass.....	75 and 10 p.c.
Round " ".....	70 and 10 p.c.
Coach.....	70 p.c.

Bolts, carriage, ¾ or smaller.....	60 and 5 p.c.
7-16 and up.....	55 p.c.
Bolts, machine, ¾ and under.....	55 and 5 p.c.
7-16 and over.....	55 p.c.

Bolts, tire.....	60 and 5 p.c.
Bolt ends.....	55 and 5 p.c.
Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	55 and 5 p.c.

Square nuts, case lots.....	3c. discount.
" small lots.....	2½c.
Hex " case lots.....	3c.
" smaller lots.....	2½c.

Rivets, iron.....	50 and 10 p.c.
Copper, No. 8.....	32
No. 12.....	36

Coil chain, 3-16 inch.....	9½
" ¼ inch.....	7½
" 5-16 inch.....	5.20
" ¾ inch.....	4.60
" 7-16 inch.....	4.45
" ¾ inch.....	4.30
" ¾ and ¾ inch.....	4

GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, Montreal.

"COMET" Brand
GALVANIZED SHEETS

are made of British Steel. The quality is the very best but the price is low. When you get the right goods, you don't mind that.

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.



BOOK
YOUR
ORDERS

now
for

Wilcox Ball Bearing
Grindstone Fixtures

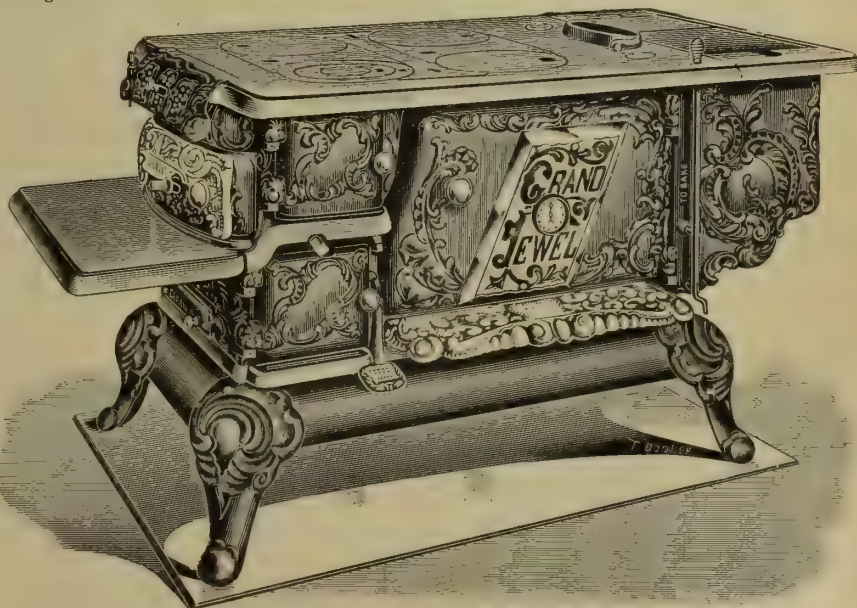
AND AVOID THE RUSH.

Do you see that unbreakable steel axle? Ask your jobber or write to :: ::

WILCOX MFG. CO. of Ontario, Limited, London, Ont.

The Grand Jewel Coal Cook Stove

sa new stove of the very highest class, specially adapted for burning Hard or Soft Coal; can also be used or burning Wood



Two Sizes—Square

Duplex Grate of improved pattern. No space left between grate and fire-box linings, so that no ashes or cinders can pass between or accumulate, so as to interfere with its easy working. One movement of the crank cuts out the dead ashes and cinders and drops them into ash pan.

The Duplex Grate when reversed forms a perfect WOOD fire bottom, and with all the coal linings in position 17 inch wood can be used. Special Wood Linings can be supplied to admit wood 24 inches long.

Manitoba
Depot

Two Sizes—with Tank

The Oven is our standard one piece Sheet Steel Oven, same as our Grand Jewel Wood Cook, which has been so wonderfully popular and successful. This Oven will never warp nor crack. With a Steel Oven much less fuel is expended in getting up a baking heat, and less required to keep the stove running.

The Oven is well ventilated.
Oven Door Thermometer.

*Water Front for either size supplied when ordered

MERRICK, ANDERSON & CO.,

Winnipeg

Spades and shovels.....	40 and 5 p.c.
Harvest tools.....	60 p.c.
Axe handles, turned, s. g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60
Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.
Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½c.
" tarred.....	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
Ammunition, cartridges, American R.F.	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance
Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00
Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 55
Powder, F.F., keg.....	4 70
F.F.G.....	5 00
Tinware, pressed, retinned.....	70 and 10 p.c.
plain.....	75 and 2½ p.c.
" pieced.....	
Japanned ware.....	37½ p.c.
Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American.....	27½c
Prime white American.....	25½c
Water white Canadian.....	25½c
Prime white Canadian.....	24½c

SCRAP.

No. 1 cast iron.....	\$14 to 15
No. 2.....	7
Wrought iron scrap.....	5
Copper (heavy).....	8½c. per lb.
Yellow brass (heavy).....	7½c. "
Light brass.....	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2½c. "
Zinc scrap.....	1c. "

PAINTS, OILS AND GLASS.

White lead.....	\$5 00 to \$5 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½
Turpentine, pure in barrels.....	\$ 0 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
Boiled.....	0 58
Lubricating oils, heavy castor machine.....	0 29
" extra engine.....	0 27
" dynamo.....	0 35
" back.....	0 22
" cylinder.....	\$0 50 to 0 75
(as to quality)	
Harness oil.....	0 50 to 0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00½
" 2nd pressure.....	1 09½

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.75; 26 to 40, \$4.00; 41 to 50, \$4.50; 51 to 60, \$5.00; 61 to 70, \$5.00, in 100-ft. boxes.

NOTES.

The energy and marvellous despatch of J. H. Ashdown have long been a proverb throughout the west, and indeed among the hardware trade of all Canada. Another proof of these qualities has just been afforded the people of Winnipeg. It was on the night of October 11 that the J. H. Ashdown retail hardware store was totally destroyed by fire. On the 27th the debris had all been cleared away and everything was in readiness to commence rebuilding. But when on that date Mr. Ashdown announced that he would be doing business again at the old stand within a

month even those who knew him well regarded the statement as a joke. It was considered quite impossible, particularly when it was known that it was Mr. Ashdown's intention to erect a magnificent structure, which would be one of the finest and best equipped hardware stores in all Canada. But true to his word, Mr. Ashdown reopened for business on the morning of Saturday, Nov. 26, much to the astonishment of Winnipeg citizens who read the announcement in large display advertisements in their morning papers. Of course the building is still far from being completed, and even the ground floor (on which only business is being done) is still in the hands of the builders. But a fairly complete stock of shelf and heavy hardware was installed on the date mentioned, and Mr. Ashdown was carrying on business at the old stand within the very short limit which he set himself.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B.C., Nov. 25, 1904.

KAMLOOPS promises to become an active centre because of the mining and lumbering resources situated in that neighborhood. Already the Iron Mask mine is being developed, and the company to operate the coal measures near the city is preparing for work on a large scale. The lumber mill of the Kamloops Lumber Co. is being reconstructed as rapidly as possible, and Michigan capitalists, represented by Mr. E. E. Ferris, are to build another. And now another coal discovery has been made. Mr. H. W. Harvey, with associates, is making application for a tract of about 10,000 acres of lands lying within the railway belt, about nine miles from Enderby and between that place and Mara. The discovery of coal in that vicinity was made about two months ago, and since then prospecting has been carried on with most promising results. A good vein of coal, some four feet in thickness, has been uncovered, and as the coal is of good quality, bituminous in character, those interested have every reason to feel they have something good in hand. Mineral prospects in the Jacko lake belt also give promise of value.

Another stage in the development of water power by the B. C. Electric Railway of this city has been reached. The Fall rains have supplied sufficient water to provide horsepower to run the entire system, consisting of the street railways in Vancouver and New Westminster, the interurban line, and the incandescent and arc lighting in both cities. A test was

made on Wednesday night, and was so satisfactory that after to-morrow the power houses in Vancouver and at Burnaby will go out of commission, which will mean an incidental saving of 300 tons of coal per day. The completion of the two mile tunnel will bring water from Lake Coquitlam to Lake Beautiful, and there will then be plenty of water all the time. This work is expected to be accomplished by the first of May next, and if the Winter rains furnish sufficient water until that time the power houses may not again be used except in cases of emergency. This scheme of securing power is one of the prettiest ever attempted on the coast, and has been carried to a successful issue so far. The total expenditure will be about two millions of dollars. It is constructed exactly on the same principle as the great tunnel in France, only on a smaller scale. The work has progressed from the start a year and a half ago without a hitch.

• • •

People from Ballard, Washington, are about to embark in the lumber industry on Clayoquot Sound, on the west coast of Vancouver Island. This coast has always had a very bad reputation with shipping men, and is known as the graveyard of the Pacific, yet those behind the construction of the big mill are confident that the difficulties of navigation will not adversely affect their enterprise. The mill is to be for export only, and will have a capacity of 200,000 feet daily, with increase if conditions are favorable, and will be the equal in size of any in the province. The timber on the west coast is of fine quality, the areas held by the company being in the vicinity of Kennedy Lake, which is connected by a stream with Clayoquot Sound. Logging railroads will be put in and other apparatus which will enable the rapid handling of logs.

• • •

Other Washington State millmen had in consideration the establishment of a saw milling enterprise in the province, but they fear the interpretation of the term "manufactured" in the order-in-council which came into force in July, 1902. They were prepared to erect a mill for the manufacture of what are technically known as "cants," which are timber rough sawed, and destined to be re-sawed. It was at first thought that cants would come within the meaning of the term "manufactured" in the regulation, but legal opinion was that no definite statement could be made. With the doubt existing those behind the proposed enterprise withdrew from the field.

• • •

Local hardware business continues good, with no features either in prices

or trade. The up-country business holds out well in spite of the fact that logging camps are buying more lightly this year than last.

The sheriff is getting busy among the smaller lumber mills, which are the first to go under because of the existing depression. The assets of three or four have already been disposed of under the hammer, and more are likely to be seized.

The syndicate of Victoria people, which is going into the whaling industry on the west coast of Vancouver Island, has procured a steamer at Christiania, Norway, specially built for such purposes, and she is now on her way here. A refinery is being built at Shushartie Bay, and the system to be followed is said to be more modern than any hitherto pursued for cutting them when taken, and for refining the oil on board ship.

Similkameen mining men have sent a large collection of ore specimens for exhibition in the rooms of the Vancouver Tourist Association. This is a good way to advertise the resources of one of the richest mineral districts in the province. Some of those interested suggested sending the exhibit to Spokane, as under present conditions there is better connection with that city from the interior of British Columbia than with any of the cities here. The Government will give no assistance to railway builders, and the people in the interior wait the pleasure of independent companies, such as the Great Northern, which will give added communication with centres in Washington State.

Miners operating along the Fraser River expect to get good money this Winter because of the remarkable lowness of the water, consequent upon the very fine Summer and Fall. Bars are in view which have never before been exposed.

The superiority of B. C. shingles is attested by the purchase of the output of two mills and a lot for immediate delivery by Mr. H. S. Stine, representing Barnes & Mauk, of Toledo.

TRADE CONDITIONS IN NOVA SCOTIA.

Halifax, Nov. 28, 1904.

BUSINESS has been very fair throughout Nova Scotia during the latter part of November. The open weather has postponed the rush of goods to outports which usually occurs just previous to the close of navigation, but this will come in due season. In the meantime jobbing houses are busy attending to the regular Fall trade. In conversation with leading houses one cannot help noticing a much more optimistic tone than was discernable last

Spring. At that time the outlook was none too promising. Wholesalers were having trouble in making collections and very conservative ideas prevailed regarding opening new accounts and the sale of goods that would increase many accounts then on the ledger. To-day a better feeling prevails, and while undoubtedly no great improvement in trade can be expected during the Winter months merchants express the opinion that the tide is turning and that next Spring will see the commencement of another brisk period in hardware and general trade circles in Eastern Canada.

• • •

Mr. F. J. Cragg, of Cragg Bros. & Co., who has just returned from a business trip to Winnipeg, is an enthusiastic believer in the trade possibilities of the west. His firm makes a specialty of sporting goods, and as an indication of the hold the game of hockey has upon Canadians he says that last Spring his firm alone sold 1,000 dozen hockey sticks, and the prospects are good for the sale of as many more this year.

• • •

The advance in metals has caused the marking up of local quotations of bar iron, zinc, and a number of the minor metals. The discount on lead pipe, which was formerly 35 per cent., has been reduced to 30 per cent., which means an advance of about 35c per coil on this article. What cost formerly \$4.55 a coil is now selling at \$4.90.

* * *

Turpentine has declined three cents per gallon. The selling prices at Halifax at present are as follows: In barrels, 89c; in smaller quantities, 94c; linseed oil is also down 2c, raw in barrels selling at 49c, and smaller quantities 52c; boiled in barrels, 50c; and smaller quantities 55c.

* * *

The wire rod mill of the Dominion Iron and Steel Co., at Sydney, is to be placed on double shift in order to meet the demand. The company has orders now in hand that are sufficient to keep the mill running on single shift for some months to come, and the mill is to be run night as well as day in order to overtake these orders and handle any new business that may come to hand. Good progress is being made with the plate mill which will be completed and in operation by March or April next.

* * *

The price of fish has again advanced 25c per quintal, and Lunenburg Bank cure is now selling here ex vessel at \$5.50. There are only about 10,000 quintals of fish unsold in Lunenburg County, as against 60,000 quintals at this time last year.

Cheap Horse Nails

are like cheap eggs—a poor investment on the part of the buyer. Better pay a little more for both, and get the best. The recollection of the quality will remain long after the price has been forgotten.

If you want the best of anything, you must be prepared to pay the best price. Don't fool yourself by thinking there are any philanthropic manufacturers of horse nails in this dear Canada of ours, much less in the land of Uncle Sam, who are worrying themselves to provide you with a dollar's worth of horse nails for seventy-five cents. Not a bit of it! You get what you pay for and no more. Rest assured of one thing; that when you buy the "C" brand horse nails; you are getting the best of everything all the way through; made from the best material obtainable in the world, by the best process, the best known brand, the best and easiest to sell, and "made in Canada."

To sum up the whole matter in a nutshell; we want your orders for "C" brand horse nails, directly or indirectly. Don't accept any substitute brands for ours, especially at the same price.

We shall send any merchant free samples for distribution to his farrier customers, or direct to them if preferred, on request to us.

Canada Horse Nail Company
MONTREAL.

Established 1865.

PAINT, OIL AND BRUSH TRADES

Artificial Shellac.

THE continually growing use of shellac, coupled with such speculative motives as have contributed to the extremely high prices that have obtained for this article during the past few years, caused, in the first instance, a great deal of adulteration to be practised, says a contributor to the Oil and Colourman's Journal. The ordinary state of things has always been somewhat abnormal. Garnet lac is admittedly a mixture of about 88 to 90 per cent. of lac and 10 to 12 per cent. of rosin. Pure button lac is only rarely met with, and is usually bought on sample, frequently containing 30 per cent., often 50 per cent., and seldom less than 10 per cent. of rosin. But standard brands are obtainable of absolute purity. Shellac of the T N standard should always be pure. During the recent high values, however, it is frequently adulterated with from 1 per cent. to 8 per cent. of rosin. But as disputed samples are usually arbitrated, and an award made on the basis of the analyst's certificate, adulteration does not always pay, as what is gained in the selling price is lost on the arbitration. Our German friends, therefore, soon proceeded to put an "artificial shellac" on the market. This being sold as an artificial body and without guarantees, is not subject to the disadvantages, from the seller's point of view, of inconvenient arbitrations and awards. From all I can gather, however, it has not displaced shellac in any industry here. I have had samples of this sent to me, and I can at once say conclusively that it is only artificial shellac in the sense that one might sell cotton as artificial linen, or refined petroleum products as artificial turpentine. The name is quite unjustifiable—it should be "shellac substitute," when the question of its suitability or the reverse, to replace shellac, can be left to the user to decide. It is merely a mixture of natural resins, sometimes with a little shellac added, and should really be placed in the category of adulterated shellacs. The average figures obtained on analysis for this mixture are as follows:

Acid value.....	3.0 to 18.0
Ester value.....	44.0 to 56.0
Saponification value.....	52.0 to 62.0
Iodine value.....	38 per cent. to 56 per cent.

A series of experiments, in which the acids of the resins were extracted and

examined, showed that these were not in the least like those of genuine shellac. The general appearance of the samples suggested the predominance of Xanthorrhoea resin, in some cases mixed with common pine rosin. The figures obtained by analysis were in accord with this, and samples prepared in which this resin (known as Red Acaroid resin) was the chief constituent, resembled the samples in question very closely. It is therefore most probable that the so-called artificial shellacs emanating from the Continent are merely mixtures of Acaroid resin and shellac, in varying proportions, and should be treated as adulterated shellac or as cheap shellac substitutes.

Colored Shellac Water Varnishes.

Every varnish maker knows that the shellac dissolves in an aqueous solution of borax, and that the resulting solution is used as water varnish. Such a

varnish is said, however, not to give good results, owing chiefly to the excess of borax used. But shellac is also soluble in liquid ammonia, and its solution in that solvent makes a very good water-proof varnish. Various colored varnishes may be made with an ammoniacal solution of shellac. Most of the insoluble earthy colors may be mixed with it. Sulphate of lime, terra alba, is said to decompose the solution. Logwood extract dissolves in it very freely; so also does aniline green. Mixed with lamp-black it makes an excellent indelible ink for laboratory labels and other purposes such as garden labels. The coating of shellac ammonia water varnish when dry is not affected by the exposure to the weather or by acid fumes. The various colored solutions are used very effectively for many decorative purposes.—Paint, Oil and Drug Review.



You can buy paint for less money than you can buy Hollywood Paint, but when your customers count the labor of putting it on, it would be dear paint in comparison to Hollywood if they got it for nothing.

Hollywood wears on the job, not off it.

In Paste, Ready Mixed and Floor.

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED.

TO THE VARNISH BUYER

the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

BERRY BROTHERS, Limited

VARNISH MANUFACTURERS

WALKERVILLE, ONT.

Write for our 100 page illustrated catalogue. Every dealer should have a copy for reference.

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.

Hard work never hurts anyone, and why not work when every effort brings good results?

So far as we are concerned, we find genuine pleasure in stretching every muscle to serve our Linseed Oil Customers as they never have been served by any other firm in the past.

OUR PURE LINSEED OIL

is a winner from the word go. Perfect in body, durability and firmness. Get it and see results.

The Dominion Linseed Oil Co.
Limited

HEAD OFFICE : 34 YONGE ST., TORONTO.

FACTORIES: BADEN, FLORA, GUELPH, OWEN SOUND, ONT.
and 31 Mill Street, MONTREAL, QUE.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Dec. 2, 1904.

WITH the close of navigation the demand for staples and ready mixed paints has been reduced considerably. Turpentine is weaker and the price has been reduced one-half cent per gallon. Linseed oil continues steady with no change in price. There is a big demand for putty and manufacturers are busy supplying orders. Other than turpentine there is no change in price.

Turpentine—Single barrels, 79c per gallon; 2 to 4 barrels, 78c per gallon. For smaller quantities than barrels 5c extra per gallon is charged. Standard gallon is 8.6 lbs. The above prices are net thirty days, for longer terms prices are higher.

Linseed Oil—Raw, 1 to 4 barrels, 43 to 44c; 5 to 9 barrels, 42 to 43c; boiled, 1 to 4 barrels, 43 to 47c; 5 to 9 barrels, 45 to 46c; delivered in Ontario between Montreal and Oshawa at 2c per gallon in advance.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2 \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1. 6c; No. 2, 5c.

Putty—Bulks, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in whole-sale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Dec. 2, 1904.

BUSINESS in paints and oils although showing a shrinkage on the whole from previous weeks as usual at this season, has kept up remarkably well in Toronto owing to the unprecedented activity in building. It is estimated that the aggregate of building under way at the present time is fully \$1,500,000 ahead of the same time last year.

In shellac gum what is known as free goods are very scarce owing to small arrivals from Calcutta and prices accordingly are expected to be firm for the next month or six weeks.

Turpentine is somewhat easier in price on account of a falling off in demand in the south where the Thanksgiving holiday seems to have interfered with trade. It is thought that present prices may not hold for many days, especially if any demand should spring up in the south, the full stock of last season's manufacture being now on the market. Locally a slight drop in quotations on turpentine and linseed oil is expected within the next day or two.

An advance in lead by grinders at the first of the year is looked for.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2,

\$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lbs. and upwards: 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs., \$4.25; ditto, in kegs of 100 lbs., \$4.50; No. 1, in casks of 560 lbs., \$3.75 to \$4; ditto, in kegs of 100 lbs., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$3 to \$3.10; white, \$3.10 to \$3.20 per gallon; No. 1 (orange), \$2.50.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 45c; boiled 48c; 5 to 9 bbls, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 77c; 2 to 4 bbls, 76c, Toronto; 5 bbls and over, f.o.b. point of shipment, net 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb.; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground 10 1-2c; finest American white, 19c; No 1 American white, 15c per lb.

In the Active Mood—Present Tense

is the situation about our new factory and office—made more active by the liberality, business foresight and good will of dealers in placing orders this Fall (for present and future shipment, with Spring dating) for Church's Cold Water

ALABASTINE

thereby insuring goods in stock when season opens in Spring, and enabling us to get ready that splendid supply of advertising matter we always furnish.

Many have not ordered. "Do it now." And, incidentally, any dealer handling LAND PLASTER, for the farmers; PARISTONE, a hard wall plaster that makes a wall as hard as adamant by simply adding sand and water; PLASTER of PARIS—"Shield Brand";—Church's BUG FINISH—wanted by everybody who raises potatoes;—all of which we manufacture—address for prices, terms, etc.,

The Alabastine Co., Limited, Paris, Ont.

A GOOD TALKER.

We make every hardware dealer an eloquent talker—our Paints, Oils, Varnishes, etc., are so good.

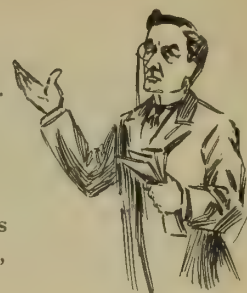
Our Machinery Paint

—for painting and finishing Engines; Pulleys, Machinery and Iron Work of every description—is not excelled anywhere. Durable, withstands extremes of heat and cold, will not oxidize or corrode, has great covering capacity. Paste and Liquid.

Send for catalogue and price list.

STANDARD PAINT & VARNISH CO., Limited,

WINDSOR,
CANADA



ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal,
Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street

GENUINE

PRATTS ASTRAL LAMP OIL

Sold in all countries and recognized as the
highest grade oil manufactured.

WHOLESALE ONLY.

THE QUEEN CITY OIL COMPANY, Limited
TORONTO, ONT.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

GLUES AGAIN

Our IMITATION FRENCH MEDAL
GLUES are of such high class
and are so suitable for Export that we would like to quote you. Export trade
in this line is growing rapidly, and we pack in casks or cases as preferred.
Quality unrivalled.

GROVE CHEMICAL CO., LTD., Appley Bridge, Lancashire, Eng.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO

MONTREAL

LONDON

OTTAWA

WINNIPEG



"ISLAND CITY" GOLD PAINT

should be given a fair trial.

We have every confidence in the
result.

It is just the thing for holiday
trade.

P. D. DODS & CO., Montreal  Toronto  Vancouver

TO CANADIAN HARDWARE MEN

The Catalogue for 1905 is now being printed in our own advertising and printing department,

FIVE HUNDRED AND SEVENTY-TWO
WILLIAM STREET, MONTREAL.

The paper and letter-press will, as usual, be the best procurable for price list work. Several new features have been added and a copy will be sent to each customer to reach them

**THE
CANADA
PAINT
COMPANY
LIMITED**

upon the First Day of January, 1905.

Hardware and Paint Jobbers requiring additional copies should send in their requisition at once as the edition will be limited.

Merchants appreciate the firm from whom they can purchase **everything** needed by the Painter, Finisher and House-Holder. In the meantime the year **1904** is still vigorous. Scrutinize your "**Want List**" and send us your sorting-up orders. At all times and in all seasons orders are appreciated and will receive the best of care.

Address :

**THE
CANADA
PAINT
COMPANY
LTD**

MONTREAL

TORONTO

Putty—Ordinary, bladders in barrels, \$1.65; pure linseed oil, \$2 to \$2.10; bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2 or barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2c per lb. and 8 1-2 for single tins.

Window Glass.

MONTREAL.

There is now no prospect of the window glass situation improving. As the season advances, however, the scarcity in the market is being felt to a less extent as the demand is lessened. There is, however, considerable call for window glass at the present time and there is every probability that any orders being filled in the near future will be done so at higher prices than at present ruling. We quote: First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent. discount 30 days.

PETROLEUM.

Refined—Prices continue unchanged. The demand is good and trade is brisk. Our quotations are as follows: Refined Canadian water white, 17 1-2c; Canadian prime white, 16c; American water white, 18c, ex warehouse.

Crude—Market is steady and prices continue unchanged. Quotations are as follows: Pennsylvania, \$1.60; Corning, \$1.37; Newcastle, \$1.47; North Lima, \$1.07; Tiona, \$1.75; South Lima, \$1.02;

Whitehouse, \$1.01; Somerset, \$1.01; Indiana, \$1.02; Canadian, \$1.53.

Turpentine in New York.

Demoralization is the term best expressing the position of the turpentine market at the moment. Buyers continue to hold off, evidently waiting for some development indicative that the declining tendency to prices has run its course. The tendency is towards a lower basis. Sellers on Wednesday reduced their limits to 51 1-2c for machine barrels in yard; at this price a limited amount of business was transacted.

Advices from Savannah state that prices in that market have dropped to 47c and that supplies to come forward from the south could be purchased at 51c.

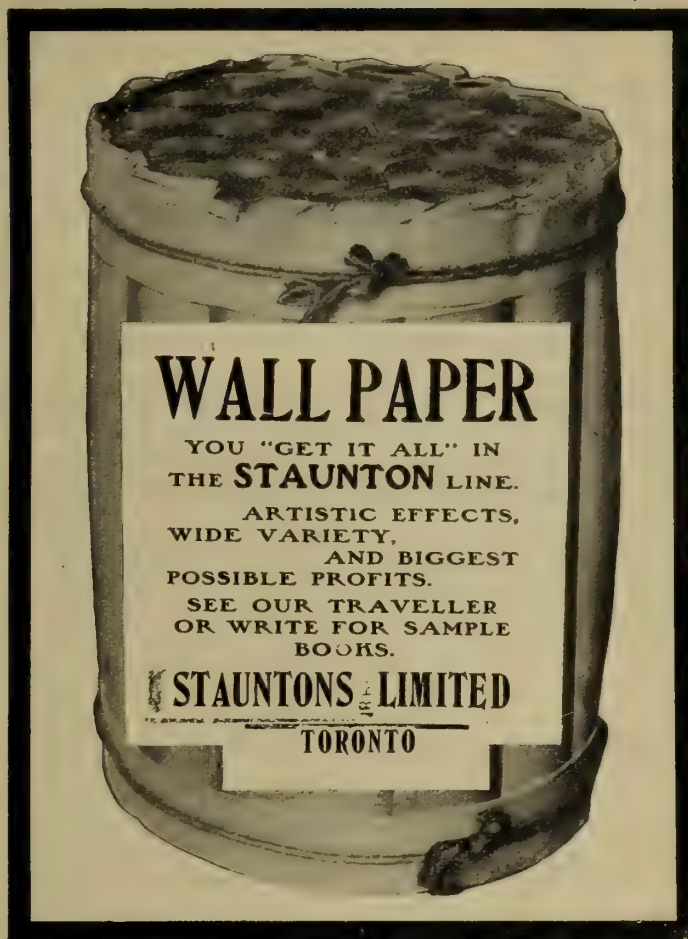
A letter has been issued to the producers calling their attention to the fact that the visible supply of turpentine amounts to 110,000 casks, which is 43,000 casks in excess of requirements, and that the indications point to a surplus in excess of requirements at the end of the crop year of 60,000 casks. Producers of Georgia, Florida, Alabama and Mississippi are reported to be contemplating an increase over their box cut of 1904 and unless they change their minds the excessive supplies resulting from this contemplated increased production, it is pointed out, will prove disastrous to their interests. Therefore it is urged that to bring about a healthier market condition is advisable that producers cut fewer boxes than in 1904 and make 10 per cent. less turpentine than this season.—New York Journal of Commerce.

ENTHUSIASTIC IN ITS PRAISE.

Readers of Hardware and Metal will remember that some little time ago attention was drawn to the fact that the Grove Chemical Co., Limited, of Appley Bridge, near Wigan, Lancashire, were introducing on the English market a scientific glue heating equipment, the product of a firm of engineers in America. It is satisfactory to note that their enterprise has been rewarded, and that the apparatus has caught hold of the judgment of English glue users. Those who have tried the Wetmore glue heater speak enthusiastically in its praise, and the boast of the manufacturers is that the use of this heater results in a saving of at least 20 per cent. in the glue room. The Grove Chemical Co., Limited, will be pleased to send a descriptive pamphlet to any applicant.

ART IN WALL PAPER.

THE present day belief that good design consists of pattern—pattern repeated ad nauseam—is an outrage on good taste. A wall paper should be a background, pure and simple; that and nothing more. If there is any pattern at all (and a discreet pattern is certainly an enrichment) it ought to be of the simplest kind, quite unobtrusive both in color and also in its motive and shape. The general tone of a wall paper is the important thing to be desired; pattern is a mere trifle in comparison with tone. The art teaching of to-day gives but little consideration to this fact. It follows in the steps of William Morris, a great man, who somehow delighted in glaring wall papers. The kind of paper hanging that we need most of all is what may be described for want of a better name as the "tone wall paper." A dozen or so of good patterns—modest patterns, well drawn and unassuming—would be enough, if only they were printed in from fifteen to twenty pleasant tones of any normal color, such as red, green, blue, gray or yellow, the gamut of the color ranging from pale to dark tones. How easy it would then be to choose a wall paper to suit the lighting of a large room! At the present time, when an apartment has to be repapered, the decorator presents for inspection half a dozen thick books filled with samples of profusely patterned papers, so various and so useless that the patient examiner soon feels distracted. It is seldom that the pattern and the color are right in the same piece; that would be too much to expect. The only thing to be done (and this one thing is not really safe) is to choose a pattern that one has seen elsewhere and liked.



The Season for Stock Food is Just Commencing

It is money lost if you delay in securing an agency for that
fast-selling line

ANGLO-SAXON STOCK FOOD and Veterinary Preparations

WRITE TO-DAY FOR OUR PROPOSITION

The 800 dealers who have sold our goods during the past nine months, and the thousands of farmers who have used them during that time, are delighted with the results secured. Every dollar's worth of our goods was **SOLD ON POSITIVE TRIAL** and every dollar's worth gave satisfaction and was paid for.

As an additional guarantee of the quality of Anglo-Saxon goods we might mention that **Mr. J. E. Brethour, of Burford, Ontario**, known to all Canadian Stock-breeders, fed and fitted his **St. Louis Exhibition Hogs on Anglo-Saxon Stock Food** and practically swept up everything in his classes, winning the following prizes:

PREMIER CHAMPIONSHIP FOR BREEDER

Two Reserve Grand Championships
Two Grand Championships

Four Championships
Two Reserve Championships

Twelve First Prizes
Fourteen Second Prizes

Eleven Third Prizes
Five Fourth Prizes

THE NAISBITT COMPANY, LIMITED

Toronto, Ontario

184 James St.
WINNIPEG, MAN.
P. C. POWYS, Manager.

8-10 Water St.
ST. JOHN, N.B.
W. W. HUBBARD, Manager

== NOW ==
 IS THE TIME TO PLACE YOUR SORTING UP ORDERS
 FOR

POCKET
KNIVES

TRUE BRAND



CUTLERY

RAZORS

SCISSORS

BEST GOODS

QUALITY GUARANTEED

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., **Montreal**

1905 ANNOUNCEMENT.

Our travellers are on the road with samples for 1905.
 Wait for our prices before contracting for

Bicycles, Tires, Tubes and Sundries.

JOHN MILLEN & SONS, MONTREAL and TORONTO

All the Advertising in the World

wouldn't sell a second order of our valves to any one if the first order did not give satisfaction. Our advertising creates interest in our valves and helps materially in securing orders for same, but we stake our existence on your being satisfied with

FAIRBANKS RENEWABLE DISC VALVES

and the phenomenal growth of our business in Canada we attribute to the satisfaction our valves are giving wherever used. Are you satisfied with the valves you are now using? If not, specify Fairbanks Valves the next time you order. If your dealer doesn't handle write us direct.

SEND FOR VALVE CATALOGUE.

THE FAIRBANKS COMPANY

MONTREAL

TORONTO

VANCOUVER

WINNIPEG



MACHINERY

THE MACHINERY MARKETS.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Dec. 1, 1904.

EVERYTHING pertaining to the machinery market has taken a turn for the better and the volume of business done during the past week has been satisfactory. From a feeling of quietness the tone has changed to one of comparative activity, carrying with it a feeling of steadiness. Many orders that have been pending for several weeks have been placed, some of them being of large amount. Engines and boilers have been installed, together with a large amount of electrical machinery, and there is more such activity in progress. Iron working machinery has seen considerable movement and many enquiries for the same have been sent in. The cloud of quietness that has been hanging over the market since a few weeks before the general elections, seems to have lifted, bringing to the fore a state of affairs that gives machinery people generally every confidence that a large volume of trade may be expected in the very near future.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, Dec. 2, 1904.

FOR this time of the year there is a very fair volume of trade being done on the machinery market. Sales are not, however, up to those of several weeks past. There is generally a slackening off in the volume of business from now until after the first of the new year. It cannot be said that there is a depression on the market as local dealers report a very fair general run of business, with one or two good orders. These orders were in the line of wood working machinery. Engines and boilers are maintaining a steady demand, and machine tools are moving.

Electric Locomotives.

Very powerful electric locomotives have recently been built by the General Electric Co., for the New York Central,

to take the place of steam engines heretofore used on the stretch of track consisting of four miles, between the city and Hoffmans. They have been officially tested, and the tests have proven satisfactory.

They are the first of forty which are being built for the New York Central Railway for its New York terminal. The official tests for speed, drawing capacity and acceleration, were conducted by the officials of the railroad, in conjunction with those of the General Electric Co., and American Locomotive Co. The electric locomotive was attached to a train consisting of nine heavy Pullman coaches and the party were drawn to the end of the line at the rate of 75 miles an hour. Although this was the maximum speed attained, there is little doubt in the minds of the officials but that a speed of 90 miles an hour can be maintained.

Machinery and Electrical Notes.

The Cement Manufacturing Co., at Tod Creek, B.C., have added five cars of new machinery to their plant.

The contract for the boilers for the heating apparatus of the new C.P.R. hotel at Winnipeg has been awarded to a Glasgow firm, the figures being \$9,000.

The Council of Calgary at a meeting held on November 23rd decided to submit to the citizens a by-law to raise \$60,000 to instal a municipal electric lighting plant.

A 600-horse-power motor generator is to be installed in a few days in the Ottawa Electric Company's powerhouse auxiliary plant on Victoria Island. The generator will prove an excellent addition to the machinery.

The building contractors, Armstrong & Sutherland, of Sydney and Glace Bay, have failed, with liabilities of about \$15,000, and assets nearly nominal. It is said that one of the members of the firm has disappeared, and a third party is now looked for who was supposed to be implicated in the firm's transactions.

The officers of United States Steel Corporation are proposing to advance the wages of their workmen. Last Sum-

mer when prices were cut in the steel market, the wages were reduced and now that the steel market has become firmer, and prices have advanced, it is expected that the men will be paid more than they have been receiving recently.

Last Spring one of the dams at Ragged Rapids broke away, and the town of Orillia was deprived of part of its lighting for several months. Recently a renewal of electrical energy has been received, and there is now available in Orillia about 1,000 horse-power for lighting and power purposes. The power plant when completed will cost the town upwards of \$300,000, and will have a capacity of 3,000 horse-power.

Considerable improvements are being effected by the Great Northern Railway of Canada, at its Montreal terminals, where they now have a first-class station with train sheds, etc., on St. Catherine street east. A turn-table and round house are being erected, and it is understood that orders will be placed for new passenger equipment. The heads of the operating and traffic departments have offices in the new building.

The contract for the installation of pneumatic tubes for the Post Office Department, both at Toronto and Montreal, has been let to the McLarens of Glasgow, Scotland. It calls for 40,000 feet of ten-inch tubing, at the beginning of May next, the price being \$1.32 per foot. The work of installing it will be commenced in the early Summer, and as early as the weather will permit the ground will be broken to admit of its being done.

There is every likelihood of new steel works being established in Canada in the near future. Two French capitalists have been traveling through the country and looking over the ground with a view to future operations. They are investigating, and propose establishing steel works, at or near Ottawa or Montreal. The construction of the Grand Trunk Pacific, with the immense demand for steel rails that will be caused, is stated as one of the reasons of the proposed company being established.

THE FLAT TURRET LATHE.

DURING the present season an improved turret lathe has been placed on the market by the Jones & Lamson Machine Co., Springfield, Vt., which embodies features that make it of special interest to readers of the Machinery Department. Although this company have been manufacturing lathes for 50 years it was not until 1891 that the flat turret lathe was first introduced, and only in the present year a new form has been placed on the market which is the first flat turret lathe with cross sliding head. It was the first machine for rapidly doing general lathe work and the first machine for accurately turning long slender work without the use of centres.

It differs from all other lathes and turret lathes in the construction of these parts

length. It may also be equipped for chuck work up to 14 inches in diameter.

TURRET DESCRIPTION.

The turret is a flat circular plate; it is mounted on a low carriage containing controlling mechanism. The connection of the turret to the carriage and the carriage to the lathe bed are the most direct and rigid, affording absolute control of the cutting tools. The turret is accurately surfaced to its seat on the carriage by scraping and securely held down on the seat by an angular gib. In the same manner the carriage is fitted to the V's of the bed; the gibs pass under the outside edge of the bed.

The indexing mechanism of the turret is of vital importance. The index pin is

slide and the cross feeding head receives its power through a speed-varying device under the convenient control of the hand wheel at head end of bed. One revolution of this wheel gives the full range of feeds from drilling feed of 120 per inch to coarse turning feed of 10 per inch and every intermediate speed. A spring torque weighing device on the feed rod gives the pulling power of this feed mechanism a known value. This device yields at a certain predetermined pressure.

In operation the carriage is fed forward until it reaches one of the stops against which it is held by this pressure till disengaged by the operator. Arresting the feed without releasing the carriage gives the tool a chance to accurately face the shoulder leaving a smooth surface instead of the rugged face left when carriage is

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Flat Turret Lathe with Motor Drive.

as follows: First—The headstock is mounted on guideways running across the machine instead of being affixed to the bed. It contains all the necessary gears and clutches for producing all of the changes of speed.

Second—The carriage carries a flat circular plate-shaped tool holder, from which the lathe takes its name of flat turret.

Third—The frame or bed is one single casting formed with guideways which run lengthwise for the carriage and crosswise for the headstock. The lower part of the bed casting serves as receptacle for chips and oil. The machine shown is the 3 x 36-inch size. It is shown arranged to handle full bars of stock up to 3 inches in diameter, turning pieces up to 36 inches in

length. It may also be equipped for chuck work up to 14 inches in diameter. The turret is turned automatically to each position the instant the tool clears the work on its backward travel, and it is so arranged that by raising and lowering trip screws near the centre of the turret it may be turned to three, four or five of the six places without making any other stops.

A simple accurate stop mechanism for the turret slide provides 12 independently adjustable stops, two for each of the six positions of the turret or any other division required by the operator. These stops connect with the 12 flat stop bars clamped side by side in the groove in top of the bed.

The feeding mechanism for the turret

released under full cut. It has been the practice heretofore to arrange the positive stop a thirty-second of an inch beyond the knock off for the feed and in the usual operation of a machine of this kind the feed knocks off, and then the turret slide released, jumps back, and the tool digs in, cutting a slight groove just back of the shoulder. When on work requiring exact shoulder distances or smoothly finished shoulders the operator brings the slide against the positive stop holding it there with as nearly as possible uniform pressure until the turner has surely faced its length. In the present machine the turret is always fed against the positive stop and held there with a uniform pressure insuring the most accurate results for shoulder length. The feed reversing for turret slide is effected

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HAMILTON, ONTARIO.

Use our "MAPLE LEAF" Belt Dressing.

We stock all regular sizes of Cap and Set Screws, and Nuts, in V., U. S. S. and Whitworth thread, and we have also in stock most of the extreme sizes, (up to 2-in. by 12-in.) in Hex Caps. They are cheaper in price than the American makes, but quality is as high as any makers can offer.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

Clauss Brand

FULLY
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TINNER SNIPS

Steel Faced on Solid Steel.

Japan Handles, Highly Finished Blades.

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H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels

Superior in Design, Workmanship
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"Take Down"
Gun Made

HARRINGTON & RICHARDSON ARMS CO.

Also makers of H. & R. Revolvers.

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QUALITY & PRICE TO SUIT
ALL GRADES OF WORK

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STAR
SPECIAL
HERCULES
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CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.

Cap Screws, Set Screws,
Machine Screws,
Cold Pressed Nuts,
Studs, Coupling Bolts,
SPECIAL MILLED WORK, Etc.

CANADA FOUNDRY CO., Limited

Head Office and Works; TORONTO, ONT.

DISTRICT OFFICES,

MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
CALGARY, VANCOUVER, ROSSLAND,



by use of a right and left hand worm either of which may be engaged at will.

CROSS SLIDING HEAD.

The distinctive feature of the original flat turret lathe was the flat plate-shaped tool holder from which it took its name. The original work holding headstock possessed many distinctive features, such as the automatic chuck and roller feed, but it contained the now nearly obsolete cone-pulley drive and back gear scheme. In the present machine is combined an ideal scheme of speed regulation with many other desirable features.

The cross feeding feature of the head grew out of a desire to get the best form of self-contained speed variator. After trying several combinations and positions it has been found best to arrange all the

and to meet this bronze bearings for the driving shafts have been used, and all of these bearings get a continual shower of oil when running, for they are enclosed in a chamber formed by the shallow pan-shaped headstock and its lid. The cross sliding head is provided with ten stops carried in a revolving holder, which is turned at will by the operator.

CHUCKING LATHE.

Just as the original flat turret lathe was the first machine to be equipped with an outfit of conveniently adjustable tools for bar work, so now with the present machine are provided a universal outfit of tools for chuck work. The ten stops for the cross feed head combined with the dozen stops for the turret and the turning and boring tools, all of the simplest and

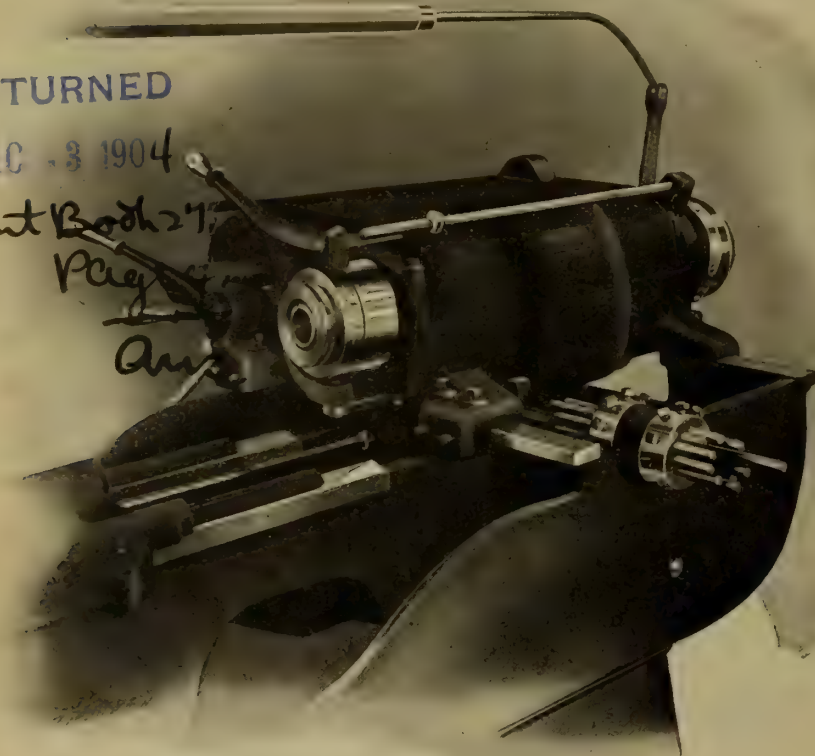
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Cross-Feed Mechanism.

shafting and gearing in a horizontal plane so that the lower half of these running parts could be submerged in oil to insure perfect lubrication. The single drive receives power at a constant speed and in one direction, and all of the changes for variation and direction of speed are obtained by clutches and gears between the power receiving shaft and the spindle. Since the pulley receiving the power is driven at a constant speed it may be belted to countershaft above or to a constant-speed electric motor on the floor at the head of the machine.

The motor requires only a compensating base to maintain even tension of the belt. The new high-speed steels tax the running bearings of a machine to their limit,

stiffest construction, make this machine ready to begin work as soon as it is supplied with the driving power. It is not only ready to begin work on the work for which it may have been purchased, but it is supplied with a set of tools that will take care of any similar piece any hour or any day in the future, and notwithstanding this universal adaptability and efficiency, tools and work are brought together under the most rigid control and under ideal conditions never before attained in a lathe. All the shears and running surfaces are protected from the dust of cast iron, so that the machine may be used for either steel work in which oil is used or for cast iron chucking.

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
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Items under this heading inserted free for readers of **HARDWARE AND METAL**

SASH and door clamp to rent or buy. Gold Medal Furniture Co., Toronto.

Thread-cutting lathe—about eighteen inches by eight feet. Box 10, Brown's Corners.

WANTED—Portable saw mill—in good running order; give particulars and price. Box 793, Globe.

WANTED—Good second-hand boiler for saw mill; must be cheap. A. O. Miller, Avonmore.

WANTED—25 hoisting engines—single and double drum; with or without boiler; new or second-hand. Address H. W. Petrie, Toronto.

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Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

BOILER FOR SALE—60 h.p., second-hand, return tubular boiler, good as new; bargain. Address Box 41, **HARDWARE AND METAL**.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, **HARDWARE AND METAL**, Montreal.

FOR SALE OR RENT—Water-power building, 40 x 80, two-storey and basement; also saw mill machinery, lately removed from another building; ready to run. McClellan, Reid & Shaneman, Gananoque, Ont.

GAS AND GASOLINE ENGINES—None better; write for prices and particulars. Tuerk Iron Works, Berlin.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.

STEEL CASTINGS—Equal to any foreign made ones, can be had from the Wm. Kennedy & Sons, Limited, Owen Sound.

TUBULAR BOILERS—A large number of first-class second-hand tubular boilers of all sizes for sale by the Polson Iron Works, Toronto.

TRADE WITH ENGLAND

Every Canadian who wishes to trade successfully with the Old Country should read

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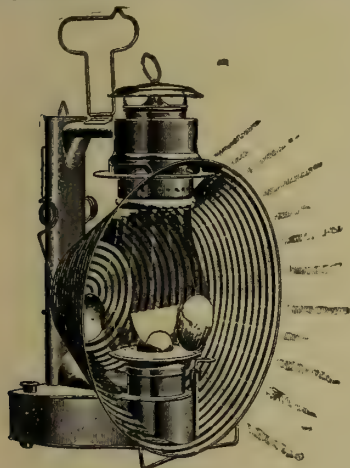
(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$4.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

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Manufacturers of the largest line of lanterns under the British flag. We make lanterns for the farmer, the artisan, the horseman, and the railway company. Ask for and accept only WRIGHT'S make of lanterns. They are the best.



No. 20 Searchlight, Pattern 1905.

A PERMANENT and Handsome Roof.



Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

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Sole agents being appointed in each district. Write to-day.

Mrs. Potts Sad Irons
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NOTICE

TO THE TRADE

In consequence of the continued demand for the genuine Mrs. Potts Irons, we will accept orders deliverable after Jan'y. 1st next.



Please bear in mind that we use the same grinding machinery as is now being used by the Enterprise Co. of Philadelphia. We claim ours to be the only perfect ground and polished irons on the market.

The H. R. IVES CO., Limited, - Montreal

Christmas Specialties



Delft Tea Pots

Hand Painted, with Nickel plated Trimmings, Three Sizes.

Delft Tea Pot Stands

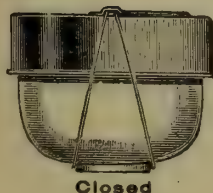
Nickel Plated Trimmings, Two Sizes 6 and 7 inches.

Very Attractive and Fast Moving.

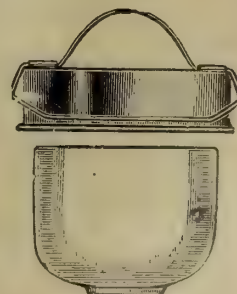
"Queen" Pudding Mould

Covered for Boiling or Steaming, Six Sizes, Nos. 12, 14, 16, 18, 20 and 22.

Needed in every home at this period of the year.



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IDEAL STOVE POLISH

The best Stove Polish on the Canadian market to-day.

Get it from your own jobber

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**Solarine Bar Polish**

Best and cheapest preparation for polishing:— Brass, Copper, Steel, Tin, Zinc, Bar Fixtures, Kitchen Utensils.

A rapid cleaner expressly designed for all kitchens.

For Ontario, Address

H. F. FALKNER,

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We make York Metal Polish, than which there is none so good, none better. It cleanses and polishes at one operation.



Sample on request. Liquid or paste.

Order through your jobber.

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OAKEY'S

The original and only Genuine Preparation for Cleaning Cutlery. 6d. and 1s. Canisters

'WELLINGTON'

KNIFE POLISH

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MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and Flint Cloths and Papers, etc.

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JOHN FORMAN, 644 Craig Street MONTREAL.

STOVES AND TINWARE.**The Western Stove Situation.**

IN its issue of November 12, the Metal Worker gives an interesting account of the stove situation in the Western States with centre market at Chicago. It seems that during August and September the stove manufacturers of Chicago failed to receive the general stocking orders from jobbers and retailers, and in consequence they became somewhat alarmed. One reason ascribed for this non-reception of the usual run of orders was that of this being Presidential year, while another reason given was that the jobbers and retail merchants hoped to break prices by holding off. Because the manufacturers did not receive the usual run of orders they were at a loss as to how to regulate their factory schedule and were accordingly obliged to fall back upon last year's estimates for the provision of each kind of stove which they would make.

About the first of October the delayed demand suddenly asserted itself and came in in exceptionally large volume, notably for large sizes of base burners. The manufacturers, as a rule, had not anticipated so large a trade for this type of stove, and the result is that there is every likelihood of a shortage in high priced and large sized base burners, and there will doubtless be a surplus of oaks and hot blast stoves. The prosperity of the agricultural west is evidenced in the purchase of the more expensive base burners instead of oaks and other cheap soft coal burning stoves. The demand for wood stoves is decreasing every year, and this year is exceptionally light.

Although the present price of pig iron is not directly affecting the present cost

of stoves, the steady advance in price of pig iron has served to stimulate the trade in stoves and has made the buying public better satisfied with the present price schedule. In fact, the dissatisfaction with prices earlier in the season was based largely on the fact that pig iron was then ruling very low, buyers forgetting that stoves placed on the market this season were made, partially at least, from pig iron that had been bought months previously at higher prices.

The tendency toward better goods has unfavorably affected trade in oil stoves and heaters, particularly the latter, and there is a prospect that a good many of these stoves will be carried over into another season unless a hard coal strike should develop to make that fuel scarce and high in price, in which case the oil stoves and heaters would be again in great demand, as they were during the former hard coal strike.

Furnace Heating Standards.

THE oldest of the central heating systems in general use in this country, says the Metal Worker, for providing a comfortable temperature in all of the apartments of a building from one fire is the hot air furnace system. Owing to the fact that this system has been widely adopted for about three-quarters of a century, less energy is being devoted by those engaged in this branch of trade to exploiting its advantages than is given to pushing some of the systems that have come into popularity during a comparatively recent period. Those who manufacture hot air furnaces confine themselves, in the majority of instances, to their production alone, and, in consequence, have comparatively little influence upon the manner in which furnaces are set and in the education of the men who engage in the setting of furnaces as a branch of their business. Consequently, the interests of the hot air furnace are left to rest largely upon the abstract merit of that system of heating, while comparatively little attention is given to the matter of setting it in the best possible manner and to more scientific methods of arriving at the size of the apparatus and the relative proportions of the various pipes and parts.

SPECIALTIES FROM THE GREEN BOOK.

No. 5—Glass Cutter—Magazine contains 6 extra disc wheels; best made.

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Send for Specialty section of the "Green Book of Hardware Specialties."

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GRAND IDEA RANGES look well and work well. They are **READY SELLERS**, and when sold give **PERFECT AND LASTING SATISFACTION**.

IF YOU WANT TO DO THE RANGE BUSINESS of your District, it will pay you to place a sample of the **GRAND IDEA** on your floor.

GRAND IDEA RANGES have Draw-Out Duplex Grates, Extra Deep Fire-Box, Vertical Oven Damper, Reliable Oven Thermometer, Convenient Basting Door, Reservoir that Will Heat, Oven that Will Bake Perfectly, Nickel that Stays Bright, and many other good points which make it a **General Favorite** wherever it is sold.

DO IT NOW. Order forward a Sample Range, and we are sure that you will agree with us when we say that the **GRAND IDEA** is the most perfect-working and altogether satisfactory range yet produced in Canada.

GUELPH FOUNDRY CO., LIMITED
GUELPH, Ont.

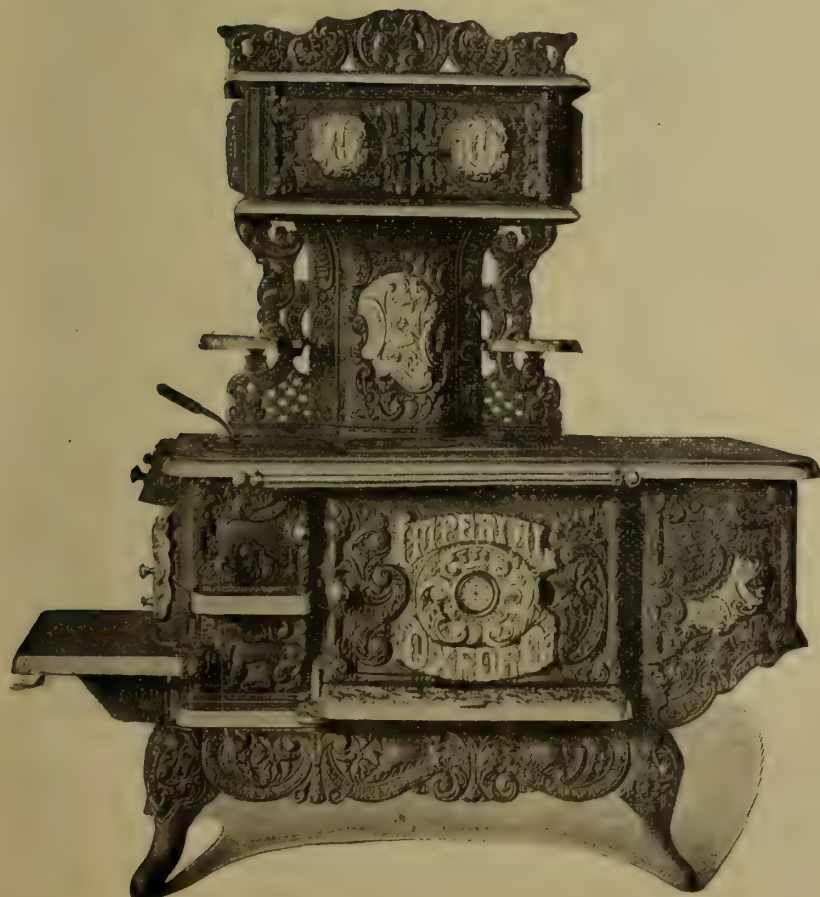
WESTERN REPRESENTATIVES—

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Long after the price paid for an article is forgotten, the customer remembers where it was bought. So when you sell a "bargain" stove your customer will always blame you for the dissatisfaction it gives. If you sell the

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you give your customer the best range value on the market. There will be no cause for complaint and your customer will always think of you as handling the best goods.

Write us for particulars about the Imperial Oxford agency for your District.

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MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE National Founders' Association, composed of iron founders of the United States and Canada, has just closed its annual convention at Cincinnati, and has elected the following Canadians to office: Vice-president, C. Bermingham, of the Kingston Locomotive Works; J. M. Taylor, Guelph, and G. W. Wattax, Toronto, were elected on the administrative council.

The Rossland ore shipments for the week ending November 26, were almost six thousand tons. The figures for the week were: Le Roi, 2,565 tons; Centre Star, 700 tons; milled, 700 tons; War Eagle, 500 tons; milled, 300 tons; Le Roi No. 2, 380 tons; Jumbo, 240 tons. Total for the week, 5,985 tons, and for the year 313,388 tons.

Mr. George Johnston, Dominion statistician, says the amount of water power actually used for electrical production throughout the world at present time is over two million horse power, and that of this amount Canada uses over one-tenth—more in fact than any other country except the United States. Canada's figures are 228,225.

The Metal Shingle & Siding Co., of Preston, have already a roof over their building and have their machinery in operation. This firm have been burned out twice during the last few months, but like the typical "John Bull," they never know when they are beaten. At any rate they are never knocked out long enough for the referee to count ten.

The Kent County Oil Co., of New Brunswick, which has been boring for oil near the Adamsville coal mines, a short distance from Moncton, struck oil recently at four hundred and fifty feet.

It is reported that A. Dick, inspector of mines in British Columbia, has been suspended pending an investigation of a charge that he wrongfully accepted money from the Crow's Nest Pass Coal Co. while holding a position of public trust.

F. H. Todd & Sons, and New York capitalists, have bought two hundred thousand acres of timber lands on both banks of the St. Croix River. The new company, known as the St. Croix Pulp and Paper Co., with headquarters at Calais, intend building a new paper mill

with a daily capacity of seventy-five tons of finished products. The new mill and dam will cost \$1,000,000, and will employ between four and five hundred men, mostly skilled mechanics.

Fetherstonhaugh & Co.'s list of recent Canadian patents comprises the following: R. H. Adams, rotary conveyors; G. Gillikson, devices for controlling the motive power of vessels; J. H. Parsons, water warmers for straw fire engine boilers; W. H. Bice, automatic feed regulators; S. Erb and W. E. Morel, fire extinguishers; C. C. Longard, wrenches; J. Rowan, commercial paper and process of making the same; W. G. Anderson, wardrobes; T. W. Chalinor, tromoles, for organs.

During the Winter Emerson & Fisher, of St. John, expect to move into their fine new building on Germain street, nearly opposite the country market. The building has been in process of erection for some six months, and from all accounts it will be one of the largest business structures yet erected in St. John. It has a frontage of 60 feet with a depth of 100 feet, and is seven storeys high. It will be equipped in the most modern manner and with every facility for displaying and handling goods.

The statement presented to the shareholders at the annual meeting of the Centre Star Mining Co., held in Toronto on Nov. 29, showed that the Centre Star and its sister mine, the War Eagle, which have been operated under the same management, have so far produced 553,932 tons of ore, which has averaged about \$14.40 per ton, or a total value of \$8,076,661. Of this, more than \$4,872,834 has gone to pay railways and smelters for freight, treating, refining and marketing charges. The balance, amounting to \$3,203,827, has been received by the mines, and the whole of this has by them been disbursed for labor and the development of ore.

NOTES.

The Sao Paulo Tramway Light & Power Co. have obtained permission from the provincial secretary to increase their capital from \$7,000,000 to \$7,500,000.

Owing to the increase in orders for wire rods, etc., the steel mills of the Dominion Iron and Steel Co., Sydney,

will have to double their staff of employees, running a double shift.

Clarke & Demill, of Galt, manufacturers of wood working machinery, are about to make some changes in their organization. They are taking new capital into the firm. They intend to build and increase their plant.

A. D. McPhee, superintendent of the McKinley mine at Grand Forks, B. C., has encountered the richest ore ever found on the property. The ore is almost solid chloropyrite and will average at least ten per cent. in copper.

The new machine shops and power station that are being erected by a Chicago construction company for the Pere Marquette at St. Thomas, have been finished. The cost of the building and equipment will be in the neighborhood of \$100,000.

An export lumber mill, with capacity of 200,000 feet per day, is to be built on Clayoquot Sound, west coast of Vancouver Island, by Ballard & Walsh, capitalists, who have acquired immense areas of standing timber in the vicinity of Kennedy Lake.

The Simpson Co.'s factory in Berlin, now under the control of the Canada Manufacturers, Limited, is to be closed and the machinery and equipment removed to Waterloo, where it will be merged with the new Shafer Killer Co. factory, also in the syndicate.

COMPANIES INCORPORATED.

Vernon Hardware Co., Vernon, B. C.; share capital \$20,000; purpose, to operate the business formerly carried on by William Vallance.

St. Croix Pulp and Paper Co., Calais; capital, \$2,500,000; purpose, to manufacture paper, also to manufacture and sell lumber. The directors are: F. Todd, I. B. Hosford, A. L. Hobson, H. F. Todd, J. L. Hobson, and G. W. Hatchett, all of New York.

Imperial Land Co., St. John; purpose, to erect and operate flour mills, saw mills, general stores, etc. The directors are: S. A. McLeod, H. H. Parlee, both of Sussex; Geo. Whitefield, St. John, and A. R. Penndyer, Montreal.

Maganh Air Brake Co., Toronto; share capital, \$400,000; purpose, to manufacture and sell air brakes for street cars and other conveyances, also to handle all kinds of machinery. The directors are: F. C. Annesley, F. J. Buller, A. J. Mitchell, R. P. Ormsby, and R. C. Vaughan, all of Toronto.

New Brunswick Iron Co., Lepreau; share capital, \$1,000,000; purpose, to mine and prepare for sale iron, coal, and other minerals, also the generation and sale of electricity. The directors are: J. S. McLennan, Sydney; C. W. Young, St. Stephen; L. B. Knight, St. John; A. D. Wetmore, Truro, and C. V. Wetmore, Sydney.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP

Warren White Sulphur Springs,
Totten P.O., Virginia.

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish
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Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.

19 LUDGATE HILL LONDON, ENG.

Order a stock of

**"Windmill Best"
Galvanized Sheets**

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, Montreal

**DON'T INVITE TROUBLE**

By Buying Imitation FIRE, Water, Dust and Air-Proof SKYLIGHTS. **BUY THE GENUINE.** Our pamphlet will tell you about "OUR IMPROVED."

Manufacturers and Contractors
of

**Metal Fireproof Windows
CORRUGATED IRON**

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

A. B. ORMSBY LIMITED,

Cor. Queen and George Streets,
TORONTO, ONT.



This design a guarantee of quality

FIBRE WRAPPING PAPER

STRONG TOUGH AND STIFF
Will Carry All Kinds Of Packages, Safely to Destination

WRITE US FOR
SAMPLES AND
PRICES.

CANADA PAPER CO.

TORONTO LIMITED MONTREAL

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- Do you know Cutts?
- It doesn't matter much whether you do or not.
- But it does matter that you know Cutts' All Metal Ash Sifter.

56

- It retails for a quarter.
- All metal, mind you, and won't come apart—can't.
- And does the work beautifully.
- What we want is orders.

Send for circular. Better, send for a dozen or two.

C. M. CUTTS & CO., SOLE MAKERS Toronto Junction, Ont.

**Pedlar's "Perfect" Metal Lath**

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.

24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.**

Everything counts, and the

POINTS IN FAVOR OF OUR GOODS

are many

Ready Roofing, Sheathing and Black  Diamond Tarred Felts,
Building Papers, Fibre and Manilla Wrappings, etc.

Ask for our quotations—they will interest you.

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLIETTE, QUE.

ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET, MONTREAL

CURRENT MARKET QUOTATIONS.

Dec. 2, 1904. —
These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$31 00 \$32 00

TIN PLATES.

Charcoal Plates—Bright. Per box.
M.L.S., equal to Bradley— \$6 50
I.C. usual sizes— 8 00
I.X. " " 9 50
I.X.X. " " 9 50

Famous, equal to Bradley—
I.C. " " 6 75
I.X. " " 8 25
I.X.X. " " 9 75

Raven and Vulture Grades—
I.C. usual sizes— 4 25
I.X. " " 5 00
I.X.X. " " 5 75
I.X.X.X. " " 6 50

"Dominion Crown Best"—Double
Coated, Tinned. Per box.
I.C. " " 5 50
I.X. " " 6 50
I.X.X. " " 7 50

Allaway's Best—Standard Quality.
I.C. " " 4 50
I.X. " " 5 50
I.X.X. " " 6 50

Coke Plates—Bright.
I.C. usual size, 14x20— 3 35
I.C. special sizes, base— 3 60
20x28— 7 10

Dean or J. G. Grade—
I.C., 20x28, 112 sheets— 7 50
I.X., Terne Tin— 10 50

Charcoal Tin Roller Plates.
X.X., 14x60, 50 sheet bxs. } 7 00
" 14x60, " " }
" 14x65, " " }

Tinned Sheets.
72x30 up to 24 gauge— 7 25 7 50
" 26 " " 7 75 8 00

IRON AND STEEL.
Common bar, per 100 lb.— 1 75
Refined " " 2 05
Horseshoe Iron " " 2 30
Hoop steel, 1 1/2 to 3-in. base— 2 75
Sleigh shoe steel, " " 2 10
Tire steel, " " 2 30 2 50

T. Firth & Son's tool steel—
Speedicut " " 0 60
Annealed speedicut " " 0 65
Self hardening " " 0 35
Best tool steel " " 0 12
Warranted " " 0 09
Best sheet steel " " 0 12

B. K. Morton & Co.—
"Alpha" high speed— 0 65
" " annealed— 0 70
"M" Self-Hardening— 0 50
"J" Standard— 0 14
"BC" " " 0 09
Jonas & Colver's tool steel— 0 10
" " " " 0 05
" " " " 0 70

Wm. Jessop & Sons—
High speed— 0 60
Standard— 0 14
Chas. Leonard— 0 08
Crucible Steel Co.—
" Rex high speed steel— 0 65 0 75
" Self Hardening— 0 45 0 50

Crucible Special— 0 17
" Silver steel— 0 13
" Black Diamond— 0 10
Sanderson's Crucible steel— 0 09
" Superior— 0 12 0 13

BABBIT METAL.

Syracuse Smelting Works:
Aluminum, genuine— 0 45
Government, " " 0 44
Tough, " " 0 40
Hard, " " 0 40
Dynamo— 0 30
Special— 0 25
Harmony— 0 22
Car Box— 0 20
Extra— 0 15

The Canada Metal Co.:
Imperial, genuine— 0 40
Metallic— 0 30
Hercules— 0 20
Star— 0 15
No. 1— 0 12
No. 2— 0 10
No. 3— 0 06
No. 4— 0 05

BLACK SHEETS.

Montreal, Toronto
10 gauge— 2 30 2 30
12 and 14 gauge— 2 30 2 35
17 " " 2 30 2 40
22 to 24 gauge— 2 35 2 50
26 " " 2 40 2 65
28 " " 2 40 2 70

Discount, 50 per cent.
COPPER WIRE.
CANADA PLATES.
Ordinary— 2 40
All bright— 3 75
Galvanized Canada Plates—
Ordinary— Dom. Crown.
18x24x52— 4 25 4 35
" 60— 4 50 4 60
20x28x80— 8 50 8 70
" 94— 9 00 9 20

GALVANIZED SHEETS. Queen's
Fleur-de-Lis, Gordon Crown, Comet Bell, Head
16 gauge— 3 65 3 75 3 85
18 to 24 gauge— 3 75 3 85 3 95
26 " " 4 00 4 10 4 20
28 " " 4 25 4 40 4 50
American brands, \$4.00 for 101 oz.
Less than case lots 10 to 15c. extra.

CHAIN.
Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 3-16 " " 5 60
" 3-16 " " 4 45
" 3-16 " " 3 85
" 3-16 " " 3 70
" 3-16 " " 3 55
" 3-16 " " 3 45
" 3-16 " " 3 35
" 3-16 " " 3 25
Halter, kennel and post chains, 40 to 40 and
5 per cent.
Cow ties— 40 p.c.
Tie out chains— 65 p.c.
Stall fixtures— 35 p.c.
Trace chain— 45 p.c.
Jack chain, iron, single and double, discount
35 p.c. Count 40 p.c.
Jack chain, brass, single and double, dis-

COPPER.
Ingots. Per 100 lb.
Casting, car lots— 14 75 15 00
Bars—
Cut lengths, round, 1/2 to 1 in.— 21 00 23 00
" round and square,
1 to 2 inches— 21 23 00
Sheet.
Plain, 16 oz., 14x48 and 14x60— 20 00
Plain, 14 oz.— 21 00
Tinned copper sheet— 24 00
Planished— 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 " " 0 21
" 50-lb. and above " " 0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb— 0 28
Spun, per lb— 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4— 0 23
Tubing, base, per lb— 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb— 6 00 6 25
Domestic " " 5 50 5 75

ZINC SHEET.

5-cwt. casks— 6 75 7 00
Part casks— 7 00 7 50

LEAD.

Imported Pig, per 100 lb— 3 60
Bar, per lb— 0 05
Sheets, 2 1/2 lb. sq. ft., by roll— 0 06 1/2
Sheets, 3 to 6 lb. " " 0 06

NOTE.—Cut sheets 1c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. lis. f.o.b. Toronto.
NOTE.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's— per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count, 17 1/2 p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.
Zinc— 6 00
Copper, discount 20 per cent. off revised list.

BATHS.

Standard Ideal Enameled.
5 1/2-ft. 2 1/2 in. rolled rim, 1st quality— 21 25
5 1/2 " " 2nd " " 17 25

CLOSETS.

Net.
Fittings— 1 00
Plain Simplex Syphon Jet— 9 00
Emb. " " 9 50
Fittings— 1 25
Low Down Elgin or Teutonic, plain— 6 00
Low " emb.— 6 50
Connection— 1 25
Plain Richelieu— 4 25
Emb. " " 4 50
Connections— 1 25
Basins, P.O., 14-in.— 0 63
Basins, oval, 17 x 14-in.— 1 50
Basins, " 19 x 15-in.— 2 00

IRON PIPE.

Black pipe— Per 100 feet.
1/2 inch— 1 97
" " 2 15
" " 2 28
" " 2 86
" " 3 62
" " 4 72
" " 5 98
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Galvanized pipe—
1/2 inch— 2 30
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American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.	
1-lb. tins, pure.	
Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.	
Pure in bbls., per cwt. Less than this quantity 4c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
umber	6 00
Raw umber	7 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	3 87½
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.	
Per 100 lb.	
Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.	
Genuine, 560 lb. casks, per cwt	\$4 25
Genuine, 100 lb. kegs.	4 75
No. 1, 560 lb. casks, per cwt.	4 00
No. 1, 100 lb. kegs, per cwt.	4 25

WHITE ZINC.	
Extra Red Seal	0 06
French V. M.	0 06
Lehigh	0 06

DRY WHITE LEAD.	
Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.	
In ½, 1 and 1-gallon tins.	
Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Parsons' Paint Co.'s pure	1 25
Lead & Color Co.'s pure	1 25
Sanderson Peacock's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts' "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle"	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.	
Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.	
In 5-gal. lots.	Per gal. Net.
Carriage, No. 1	1 50 1 60
Pale durable body	4 10 4 25
"rubbing	2 85 3 20
Gold size, japan	1 50 1 60
No. 1 brown japan	0 85 0 90
Elastic oak	1 50
Furniture, extra	1 10 1 25
"No. 1	0 90 1 00
Hard oil finish	1 35 1 50
Light oil finish	1 60 1 70
Damar	1 75 2 00
Shellac, white	2 40 2 50
"orange	2 30 2 40
Turpentine, brown japan	1 10 1 20
"black japan	1 10 1 20
"No. 1	0 85 0 90
Elastilite varnish, 1 gal. can, each	2 00
Granite floor finish, per gal.	2 75
Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each.	
Sherwin-Williams' kopal varnish, assorted case, from 1 gal., \$2.50.	

GLUE.	
Common	0 08 0 08½
French medal	0 10 0 14
White, extra	0 18 0 22
Gelatin	0 18 0 20
Strip	0 18 0 20
Coopers	0 19 0 20
Huttner	
Ground	0 12 0 16
Cologne, genuine	

HARDWARE.

AMMUNITION.—	
Cartridges.	
B. B. Caps Dominion, 50 and 5 and 25 per cent. American \$2.00 per 1000.	
C. B. Caps American, \$2.50 per 1000.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, list net Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American	
10 per cent. advance on list.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.	
per lb.	
Best thick brown or grey felt wads, in ¼-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8	0 90
5 and 6	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8	1 65
5 and 6	1 90

ADZES.	
Discount 20 per cent.	
ANVILS.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.	
Woodyatt Hudson, per doz., net	4 50
AUGERS.	
Gilmour's, discount 65 and 5 per cent. off list.	
AXES.	
Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit, " "	10 00 18 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50 6 00
Boys' Axes	6 25 7 00
Splitting Axes	7 00 12 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.	
Red Ridge, boys', handled	5 75
hunters'	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.	
Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00
BELLS.	
Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	

Cow.	
American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	
Door.	
Gongs, Sargent's	5 50 8 00
Peterboro', discount 50 and 10 per cent. off new list.	
Farm.	
American, each	1 25 3 00
House.	
American, per lb.	0 35 0 40

HELLOWS.	
Hand, per doz.	3 35 4 75
Moulders, per doz.	7 50 10 00
Blacksmiths', discount 40 per cent.	
BELTING.	
Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITS.	
Auger.	
Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	
Car.	
Gilmour's, 47½ per cent.	
Expansive.	
Clark's, 40 per cent.	

Gimlet.	
Clark's, per doz.	0 65 0 90
Diamond, Shell, per doz.	1 00 1 50
Nail and Spike, per gross	2 25 5 20
BLIND AND RED STAPLES.	
All sizes, per lb.	0 07½ 0 12

BOLTS AND NUTS	
Per cent.	
Carriage Bolts, common (\$1 list)	
" 3-16 and ½"	60 and 10
" 5-16 and ¾"	55 and 5
" 7-16 and up	55 and 5
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Blank Bolts	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., ½ to 6c.	

BOOT CALKS.	
Small and medium, ball	per M. 4 25
Small heel	4 50
BRIGHT WIRE GOODS.	
Discount 62½ per cent.	

BUTCHERS' CLEAVERS.	
German	per doz. 6 00 9 00
American	" 12 00 18 00

BUTCHER KNIVES.	
Bailey's	per doz. 0 60 6 30

BUILDING PAPER, ETC	
Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 400 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof " small packages	0 25
Refined Tar	per barrel 5 00
Coal Tar	" 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 00

BULL RINGS.	
Copper, \$2.00 for 2½-inch, and \$1.9 or 2-inch.	

BUTTS.	
Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 60 per cent.	

Wrought Steel.	
Fast Joint, discount 70 to 70 and 5 per cent.	
Loose Pin, discount 70 to 70 and 5 per cent.	

CARPET STRETCHERS.	
American	per doz. 1 00 1 50
Bullard's	" 6 50

CASTORS.	
Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.	
No. 32 and 33	per gross 7 50 8 50

CHALK.	
Carpenters' Colored, per gross	0 45 0 75
White lump	per cwt. 0 60 0 65
Red	" 0 05 0 06
Crayon	per gross 0 14 0 18

CHISELS.	
Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.	
Colonial Stock Foods, 50c. packages,	per doz \$4 00
" " " 25c. pkgs.	2 00
" " " 10c. "	75
" " " 25-lb. pall, each	1 30
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz.	1 25
Worm	1 25
International Stock Foods, \$1 packages,	per doz. 8 00
International Stock Foods, per pall	2 75
" " " 10c. pkgs. per lb.	10 50
" " " 10c. pkgs. per lb.	8 00
" " " 25-lb. pall, each	2 00
" " " 25-lb. pall, each	8 00
" " " 25-lb. pall, each	8 00
" " " 25-lb. pall, each	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz	

CLOTHES REELS.	
Davis Clothes Reels, dia. 40 per cent.	

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.			
Plain or Corrugated.			
1-inch	per 100 feet	3 00	
3 "	"	4 00	
4 "	"	5 25	
5 "	"	6 75	
6 "	"	9 00	

CRADLES, GRAIN.			
Canadian, discount 20 to 25 per cent.			

CROSSCUT SAW HANDLES.			
S. & D., No. 3	per pair	0 17½	
S. & D., " 5	"	0 22½	
S. & D., " 6	"	0 15	
Boynton pattern	"	0 20	

DOOR SPRINGS.			
Torrey's Rod	per doz.	1 85	
Coil, 9 to 11 in.	"	0 95	1 85
English	"	2 00	4 00

DRAW KNIVES.			
Coach and Wagon	discount 50 per cent.		
Carpenters'	discount 60 and 10 per cent.		

DRILLS.			
Hand and Breast.			
Miller's Falls	per doz., net list.		

DRILL BITS.			
Morse	discount 37½ to 40 per cent.		
Standard	discount 50 and 5 to 55 per cent.		

FAUCETS.			
Common, cork-lined, discount 35 per cent.			

EAVETROUGHS.			
10-inch	per 100 ft.	10 00	

ELBOWS (stovepipe.)			
5 and 6-inch, common	per doz.	1 20	
7-inch	"	1 35	
Polished, 15c.	per dozen extra.		

ESCUTCHEONS.			
Discount 50 and 10 per cent., new list			

ESCUTCHEON PINS.			
Iron, discount 40 per cent.			

FACTORY MILK CANS.			
Discount off revised list, 40 per cent.			

FILES AND RASPS.			
Great Western	70 and 10 per cent.		
Arcade	70 " 10 "		
Kearney & Foot	70 " 10 "		
Diaston	70 " 10 "		
American	70 " 10 "		
J. Barton Smith	70 " 10 "		
McClellan	70 " 10 "		
Eagle	70 " 10 "		
Nicholson	60 and 10 to 60, 10 and 5 "		
Royal	80 " 70 to 75 "		
Globe	70 " 70 to 75 "		
Black Diamond	60 and 10 to 60, 10 and 5 per cent.		
Jowitt's, English list	25 to 27½ per cent.		
Nicholson File Co.'s "Simplicity" file handle,	per gross 85c. to \$1.50		

GLASS.			
Window. Box Price.			
Size United	Per	Per	D. Diamond
Inches.	50 ft.	100 ft.	50 ft. 100 ft.
Under 26	3 80		5 06
26 to 40	4 00		5 44
41 to 50	4 50		6 56
51 to 60	4 75		7 50
61 to 70	5 00		8 62
71 to 80	5 30		9 38
81 to 85			10 75
86 to 90			12 30
91 to 95			15 00
96 to 100			18 00

HARDWARE.			
Marking, Mortise, Etc.			
Stanley's, discount 50 to 55 per cent.			
Wire Gauges.			
Winn's, Nos. 26 to 33	each	1 65	2 40
GILLET'S POWDERED LYE.			
1-case, \$3.70; 3-case, \$3.60; 5-case and over,			\$3.50.

HALTERS.			
Rope, 1-inch	per gross	1 00	
Rope, 1 to 1½-inch	"	12 00	
Rope, 1 to 1½-inch	"	14 00	
Leather, 1-inch	per doz.	4 00	
Leather, 1½ "	"	5 20	
Web	"	2 45	

HAMMERS.			
Nail.			
Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.			

TACK.			
Magnetic	per doz.	1 10	1 20
SLEDGE.			
Canadian	per lb.	0 07½	0 08½

BALL PEEN.			
English and Canadian	per lb.	0 22	0 25

HANDLES.			
Axe, 2nd growth	per doz. net	3 00	4 00
Store door	per doz.	1 00	1 50

FORK.			
C. & B., discount 40 per cent., revised list.			
HOE.			
C. & B., discount 40 per cent., revised list.			

SAW.			
American	per doz.	1 00	1 25
PLANE.			
American	per gross	3 15	3 75

HAMMER AND HATCHET.			
Canadian, discount 40 per cent.			

HANGERS.			
doz. pairs.			
Steel barn door		\$ 00	10 00
Stearns, 4-inch		4 50	
" 5-inch		6 00	
Zenith		9 00	

LANE'S COVERED—			
No. 11, 5-foot run		8 40	
No. 11½, 10-foot run		10 80	
No. 12, 10-foot run		12 60	
No. 14, 15-foot run		21 00	
Steel, covered		4 00	11 00
" track, 1 x 3-16 in (100 ft)		3 75	
" " 1½ x 3-16 in (100 ft)		4 75	

HARVEST TOOLS.			
Discount 60 per cent.			

HATCHETS.			
Canadian, discount 40 to 42½ per cent.			
Shingle, Red Ridge 1	per doz.	4 40	
" 2	"	4 85	
Barrel, Underhill		5 00	

HAT ENAMEL.			
Henderson & Potts' "Anchor Brand"			

HINGES.			
Blind, Parker's	discount 60 per cent.		
Heavy T and strap, 4-in.	per lb.	0 06½	
" " 6-in.	"	0 08	
" " 8-in.	"	0 05½	
" " 10-in.	"	0 05½	

LIGHT T AND STRAP, discount 65 and 5 per cent.			
Screw hook and hinge—			
6 to 10 in.	per 100 lb.	4 50	
12 in. up	"	3 25	
Spring, No. 20, per gross pairs		10 50	
Spring, Woodyatt pattern, per gross, No. 5,		\$17.50; No. 10, \$18; No. 20, \$10.80; No.	
120, \$20; No. 51, \$10; No. 50, \$27.50.			

HOES.			
Garden, Mortar, etc.	discount 60 per cent.		
Planter	per doz.	4 00	4 50

HOLLOW WARE.			
Tinned cast, 35 per cent.			

HOOKS.			
Cast Iron.			
Bird cage	per doz.	0 50	1 10

Clothes line, No. 61	"	0 00	0 70
Harness	"	0 60	12 00
Hat and coat	per gro.	1 10	10 00
Chandelier	per doz.	0 50	1 00

WROUGHT IRON.			
Wrought hooks and staples Canadian discount 60 per cent.			

WIRE.			
Hat and coat	discount 60 per cent.		
Belt	per 1,000	0 60	
Screw, bright	discount 60 per cent.		

HORSE NAILS.			
"P.B." Brand, 55 to 60 per cent.			
"C" brand, 40, 10 and 7½ per cent. off list	{ Oval		
"M" brand, 55, per cent.	{ head		
"Monarch", 50 and 7½ per cent.			
"Peerless", 50 per cent. dia.			

HORSESHOES.			
F.O.B. Montreal			
"P.B." brand, new pattern, base		\$3 50	
"M." brand, base		3 65	
Add 15c. Toronto, Hamilton, Guelph.			

JAPANNED WARE.			
50 per cent.			
FICKS.			
Star	per doz.	3 00	3 25

KETTLES.			
Brass spun 7½ per cent. discount off new list.			
Copper	per lb.	0 30	0 50
American, 60 and 10 to 65 and 5 per cent.			

KEYS.			
Lock, Canadian dis. 40 to 40 and 10 per cent.			
Cabinet, trunk and padlock,			
American	per gross	0 60	

KNOBS.			
Door, japanned and N.P., per			
doz.	1 50	2 50	
Bronze, Berlin	per doz.	2 75	3 25
Bronze, Genuine	"	6 00	9 00
Shutter, porcelain, F. & L.			
screw	per gross	1 30	2 00
White door knobs	per doz.	2 00	

LAMP WICKS.			
Discount, 60 per cent.			

LADDERS, EXTENSION.			
Waggoner Extension Ladders, dis. 40 per cent.			

LANTERNS.			
Cold Blast	per doz.	7 00	
No. 3, "Wright's"	"	8 50	
Ordinary, with O burner	"	4 00	
Dashboard, cold blast	"	9 00	
No. 0	"	5 75	
Japanning, 50c. per doz. extra.			

LEMON SQUEEZERS.			
Porcelain lined	per doz.	2 20	5 60
Galvanized	"	1 87	3 85
King, wood	"	2 75	2 90
King, glass	"	4 00	4 50
All glass	"	0 50	0 90

LAWN MOWERS FOR 1905.			
Woodyatt, 10½-in., 14-in. cut	\$ 3 50 to \$11 00		
Star, 9-in.	6 00 to 6 50		
Daisy, 8-in.	5 25 to 5 75		
Philadelphia, 7½-in.	6 00 to 7 50		
Woodyatt, 10½-in., ball bearing	13 25 to 18 00		
Grass Boxes	1 75 to 2 00		
King Edw'd, 12-in., 14-in. cut	9 00 to 10 00		

HORSE LAWN MOWERS, "Special."			
Discount, 50 per cent., with freight concessions in quantity shipments.			

MAXWELL & SONS:			
10½-in. high wheel	7 50	10 00	
9-in.	5 50	6 25	
8-in.	4 90	5 50	
Discount 50 per cent.			

LOCKS.			
Canadian, 50 to 50 and 10 per cent.			
Russell & Erwin	per doz.		

CABINET.			
Eagle, discount 30 per cent.			

PADLOCKS.			
English and Am.	per doz.	0 50	6 00
Eagle, discount 20 to 25 per cent.			

MACHINE SCREWS.	
Iron and Brass.	
Flat head,	discount 25 per cent.
Round head,	discount 20 per cent.

BUY AS YOU NEED THEM, BUILD AS YOU WANT THEM.

Here's our sectional idea. Doesn't it look simple?
Just as simply operated as it appears.

We Spent 21 Years Putting in and Devising New Systems

and can now systematize any business with our Sectional Cabinets. The cut shows a complete cabinet comprising three 2-Dr. Vertical Sections; three 9-Dr. Shannon Filing and Record-keeping Devices; two 15-Dr. 5x3 stock and cost system, and a 6-Dr. document file. Who would be without the modern way of doing modern business? Would you? Write for further particulars.

THE OFFICE SPECIALTY MFG. CO., Limited

55 YONGE STREET,
Factories—Newmarket.

Our new premises almost ready—97-103 Wellington St. W.,
TORONTO.



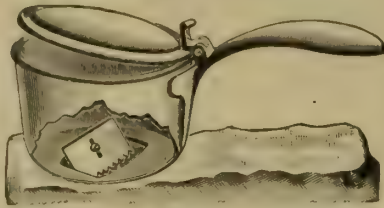
SEE THE IDEA ?

PLANE IRONS.			SAP SPOUTS.			STAPLES.			ENAMELLED WARE.		
English	per doz.	2 00 5 00	Bronzed iron with hooks	per 1,000	7 50	Galvanized		3 00	White, Princess, Turquoise, Blue and White		
Button's genuine, per doz. pairs, discount 37 1/2 to 40 per cent.			"Eureka" tinned steel, hooks	"	8 00	Plain		2 80	discount 50 per cent.		
Button's imitation, per doz.	5 00	9 00	SAWS.			Copper, discount 45 per cent.			Diamond, Famous, Premier, discount 50 and 10 per cent.		
German	0 60	0 60	Hand, Diaston's, discount 12 1/2 per cent			Poultry netting staples, discount 40 per cent.			Granite or Pearl, Imperial, Crescent, discount 50, 10 and 10 per cent.		
PRESSED SPIKES.			S. & D., discount 40 per cent.			STOCKS AND DIES.			Premier steel ware, 40 per cent.		
Discount 20 per cent.			Crosscut, Diaston's, per foot	0 35	0 55	American discount 25 per cent.			"Star" decorated steel and decorated white 25 per cent.		
PULLEYS.			S. & D., discount 35 per cent. on Nos. 2 and 3.			STONE.			WIRE.		
Hothouse	per doz.	0 55 1 00	Hack, complete, each	75	2 75	Washita	per lb.	0 28 0 60	No. 9 gauge		\$2 25
Awning	"	0 27 1 00	frame only, each	0 50	1 25	Hindustan	"	0 08 0 07	10		60 extra.
PUMPS.			SASH WEIGHTS.			Labrador	"	0 09 0 09	12		20c "
Canadian cistern	1 80	3 60	Sectional, per 100 lb.	2 00	2 25	Turkey	"	0 13 0 15	13		30c "
Canadian pitcher spout	1 40	2 10	Solid	1 50	1 75	Arkansas	"	0 30 0 30	14		40c "
PUNCHES.			SASH COORD.			Water-of-Ayr	"	5 00 5 00	15		55c "
Saddler's	per doz.	1 00 1 85	Per lb.	0 28	0 30	Scythe	per gross	3 50 28 00	16		70c "
Conductor's	"	3 00 15 00	SAW SETS.			Grind, 40 to 200 lb. per ton.		28 00 31 00	Smooth Steel Wire.		
Finners, solid, per set		0 72	Lincoln and Whiting	4 75		" under 40 lb.			20		10c "
" hollow, per inch		1 00	Hand Sets, Perfect	4 00		200 lb. and over			22		12c "
RAZORS.			X-Cut Sets,	7 50		STOVEPIPES.			24		15c "
Wood	per doz. net	1 20 up.	SCALES.			5 and 6 inch, per 100 lengths		7 00	26		10c "
REGISTERS.			Gurney Standard, 40 per cent.			7 inch		7 50	28		10c "
Discount 40 per cent.			Gurney Champion, 50 per cent.			TACKS, BRADS, ETC.			30		10c "
RIVETS AND BURKS.			Burrow, Stewart & Milne—			Carpet tacks, blued		80 and 15	32		10c "
Iron Rivets, black and tinned, 60 and 10 p.c.			Imperial Standard, discount 40 per cent.			" tinned		80 and 20	34		10c "
Iron Burrs, discount 55 per cent.			Weigh Beams, discount 35 per cent.			" (in kegs)		40	36		10c "
Copper Rivets, with usual proportion burrs, 45 per cent.			Champion Scales, discount 50 per cent.			Cut tacks, blued, in dozens only		80	38		10c "
Copper Burrs only, discount 30 and 10 per cent.			Fairbanks standard, discount 35 per cent.			" weights		60	40		10c "
Extras on Tinned or Coppered Rivets, 1-lb. packages 1c. per lb.; 1-lb. packages 2c. lb.			" Dominion, discount 55 per cent.			Swedes cut tacks, blued and tinned—		80 and 10	42		10c "
RIVET SETS.			" Richelieu, discount 55 per cent.			In bulk		75	44		10c "
Canadian, discount 35 to 37 1/2 per cent.			Warren's new Standard, discount 40 per cent.			In dozens		75	46		10c "
ROPE, ETC.			" Champion, discount 50 per cent.			Swedes, upholsteryers', bulk		85, 12 1/2 and 12 1/2	48		10c "
Sisal		0 11	Weightbeams, discount 35 per cent.			brush, blued and tinned		70	50		10c "
Pure Manila		0 14 1/2	SCREW DRIVERS.			bulk		70	52		10c "
"British" Manila		0 11 1/2	Sargent's	per doz.	0 65 1 00	Swedes, gimps, blued, tinned and japanned		75 and 12 1/2	54		10c "
Cotton, 3-16 inch and larger	0 21	0 22	SCREEN DOORS.			Zinc tacks		35	56		10c "
" 5-32 inch	0 25	0 27	Common doors, 2 or 3 panel, walnut stained, 4-in. style, per doz.	6 50		Leather carpet tacks		55	58		10c "
" 1 inch	0 25	0 28	Common doors, 2 or 3 panel, yellow and green stained, 4-in. style, per doz.	6 75		Copper tacks		50	60		10c "
Russia Deep Sea		0 16	Common doors, 2 or 3 panel, in natural colors, oil finish, per doz.	8 75		Copper nails		52 1/2	62		10c "
Jute		0 10	3-in. style 20c. per dozen less.			Trunk nails, black		65 and 5	64		10c "
Lath Yarn, single		0 10	SCREWS.			Trunk nails, tinned		65 and 10	66		10c "
Sisal bed cord, 48 feet, per doz.	0 65		Wood, F. H., bright and steel, discount 87 1/2 per cent.			Clout nails, blued		65 and 5	68		10c "
" 60 feet, per doz.	0 80		Wood, F. H., bright, dia. 82 1/2 per cent.			Chair nails		35	70		10c "
" 72 feet, per doz.	0 95		" F. H., brass, dia. 80 per cent.			Patent brads		40	72		10c "
RULES.			" R. H., dia. 75 per cent.			Fine finishing		40	74		10c "
Boxwood, discount 70 per cent.			" F. H., bronze, dia. 75 per cent.			Lining tacks, in papers		10	76		10c "
Ivory, discount 20 to 25 per cent.			" R. H., dia. 70 per cent.			" in bulk		15	78		10c "
SAD IRONS.			Drive Screws, dia. 87 1/2 per cent.			" solid heads, in bulk		15	80		10c "
Mrs. Potts, No. 55, polished, per set	0 80		Bench, wood	per doz.	3 25 4 00	Saddle nail, in papers		10	82		10c "
" No. 50, nickel-plated, "	0 90		" iron	"	4 25 5 00	" in bulk		15	84		10c "
Common, plain, "	4 50		Set, case hardened, dia. 60 per cent.			Tufting buttons, 22 line, in dozens only		60	86		10c "
" plated	5 50		Square Cap, dia. 50 and 5 per cent.			Zinc glaziers' points		5	88		10c "
SAND AND EMERY PAPER.			Hexagon Cap, dia. 45 per cent.			Double pointed tacks, papers		90 and 10	90		10c "
R. & A. sand, discount, 40 and 5 per cent.			SCYTHES.			bulk		40	92		10c "
Emery, discount 40 per cent.			Per doz. net	6 00	9 00	Clinch and duck rivets		45	94		10c "
Scott (Burton's) 5 to 10 per cent. advance on list.			Canadian, discount 40 per cent.			TAPE LINES.			96		10c "
			SHEARS.			English, ass skin	per doz.	2 75 5 00	98		10c "
			Clausen, nickel, discount 80 per cent.			English, Patent Leather		5 50 9 75	100		10c "
			Clausen, Japan, discount 67 1/2 per cent.			Chesterman's	each	0 90 2 85	102		10c "
			Clausen, tailors, discount 40 per cent.			steel	each	0 80 8 00	104		10c "
			Seymour's, discount 50 and 10 per cent.			TINNERS' SNIPS.			106		10c "
			SHOVELS AND SPADES.			Per doz.		3 00 15 00	108		10c "
			Canadian, discount 45 per cent.			Clausen, discount 35 per cent.			110		10c "
			SHIRTS.			THERMOMETERS.			112		10c "
			Cast iron, 16 x 24	0 85		Game, Newhouse, discount 25 per cent.			114		10c "
			" 18 x 30	1 00		Game, H. & N. P. S. & W., 65 per cent.			116		10c "
			" 18 x 36	1 40		Game, steel, 72 1/2, 75 per cent.			118		10c "
			SNAPS.			TROUSERS.			120		10c "
			Harness, German, discount 25 per cent.			Diaston's, discount 10 per cent.			122		10c "
			Lock, Andrews	4 50	11 50	German	per doz.	4 75 6 00	124		10c "
			SOLDERING IRONS.			S. & D., discount 35 per cent.			126		10c "
			1, 1 1/2-lb.	per lb.	0 37	TWINKS.			128		10c "
			2-lb. or over		0 34	Bag, Russian	per lb.	0 27	130		10c "
			SQUARES.			Wrapping, cotton, 3-ply		0 24	132		10c "
			Iron, No. 492	per doz.	1 90 2 25	4-ply		0 27	134		10c "
			" No. 493	"	2 40 2 55	Mattress	per lb.	0 33 0 45	136		10c "
			" No. 494	"	3 25 3 40	Staging		0 27 0 35	138		10c "
			Steel, discount 60 and 5 to 65 per cent.			WIRERS.			140		10c "
			Try and Bevel, discount 50 to 52 1/2 per cent.			Wright's		0 134	142		10c "
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			Retinned, discount 75 per cent. off revised list.			No. 2		5 50	148		10c "
						Saw Vise		4 50 9 00	150		10c "
						WROUGHT IRON WARE.			152		10c "
						Columbia Hardware Co.			154		10c "
						Blacksmiths' (discount) 60 per cent.			156		10c "
						parallel (discount) 45 per cent.			158		10c "

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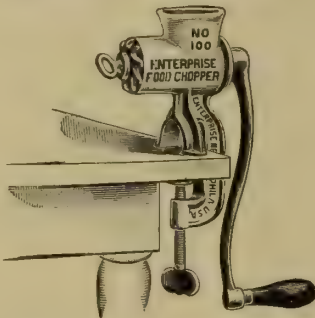
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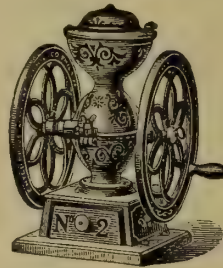
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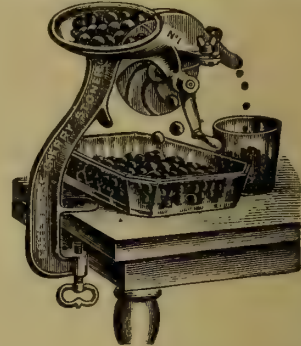
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Ingersoll, Son & Co., London, Eng.

McGregor—Banwell Fence Co., Windsor, Ont.

Merrick, Anderson & Co., Winnipeg.

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Ontario Wire Fencing Co., Picton, Ont.

Owen Sound Wire Fence Co., Owen Sound.

Page Wire Fence Co., Walkerville, Ont.

Walter, E. F., & Co., Montreal.

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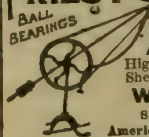
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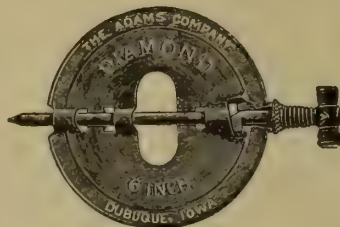
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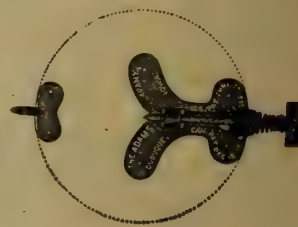
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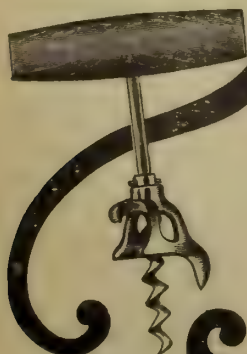
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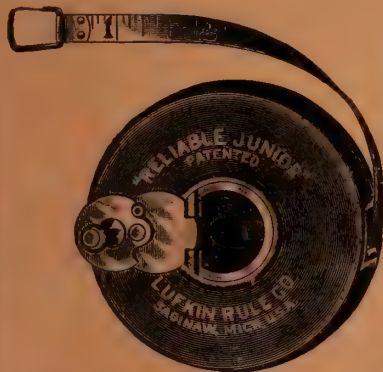
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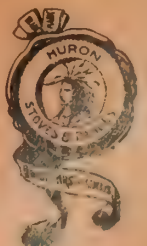
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NO. 50

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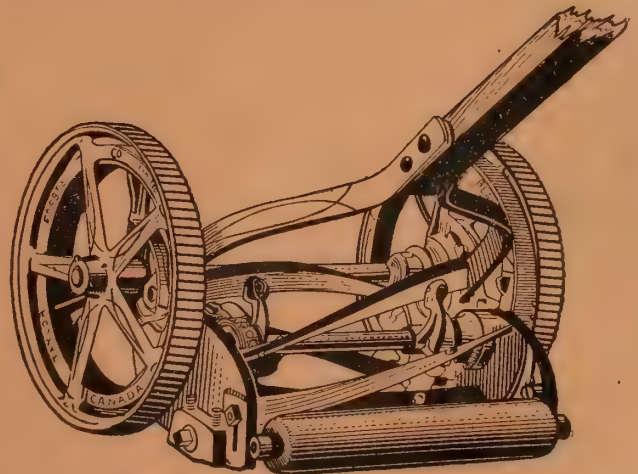
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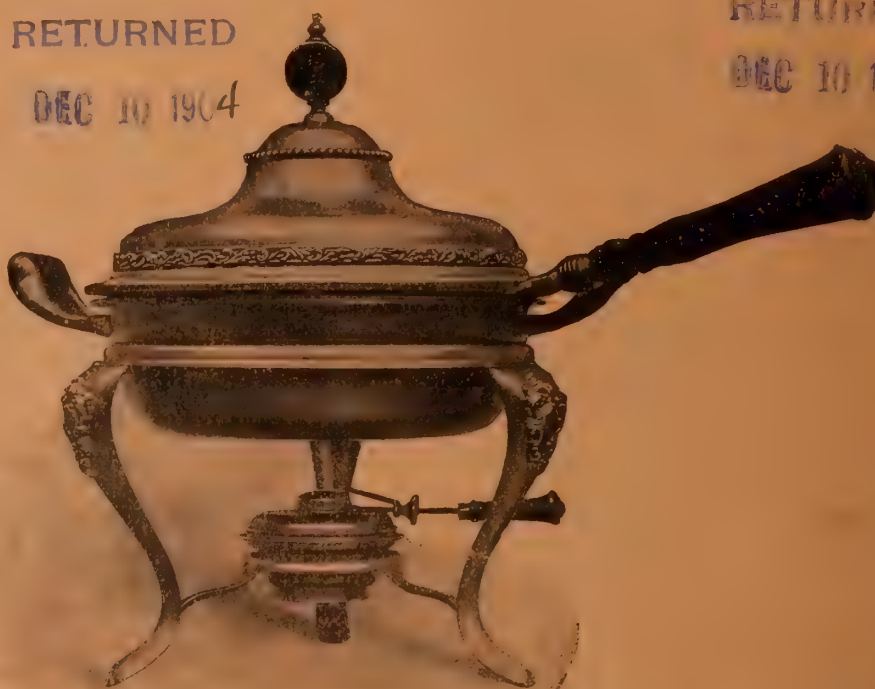
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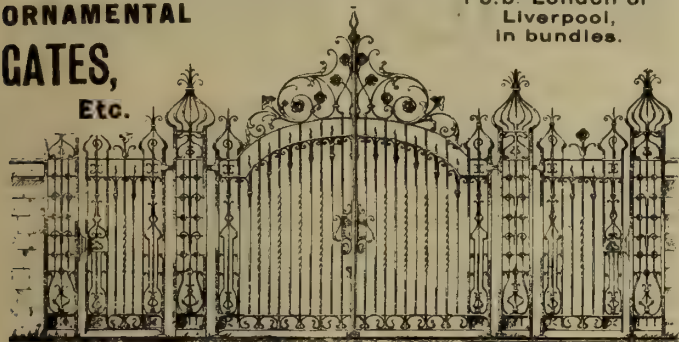
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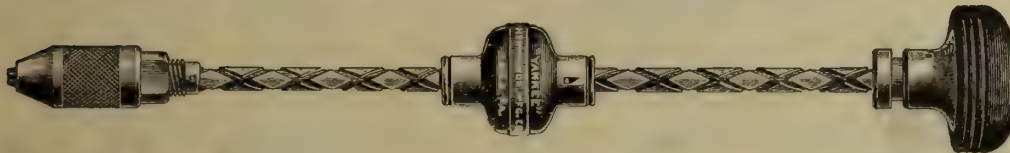
No. 15. “Yankee” Ratchet Screw Driver, with Finger Turn on Blade.



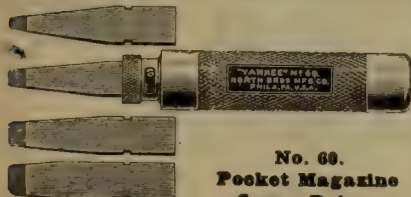
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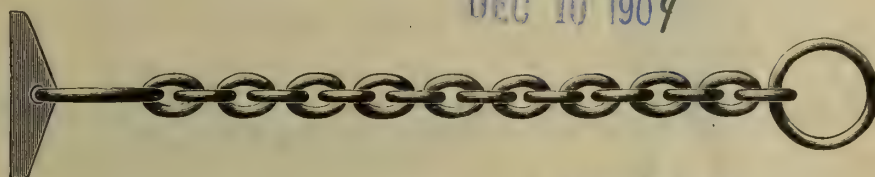
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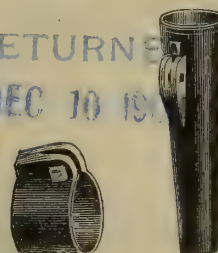
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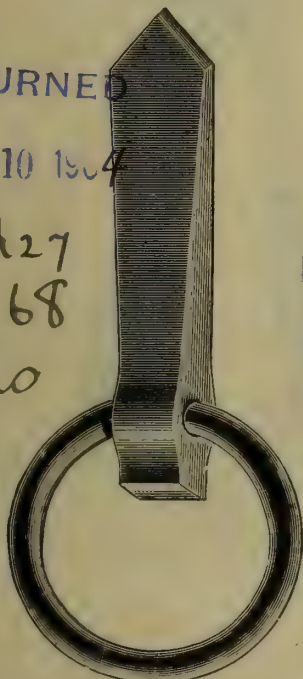
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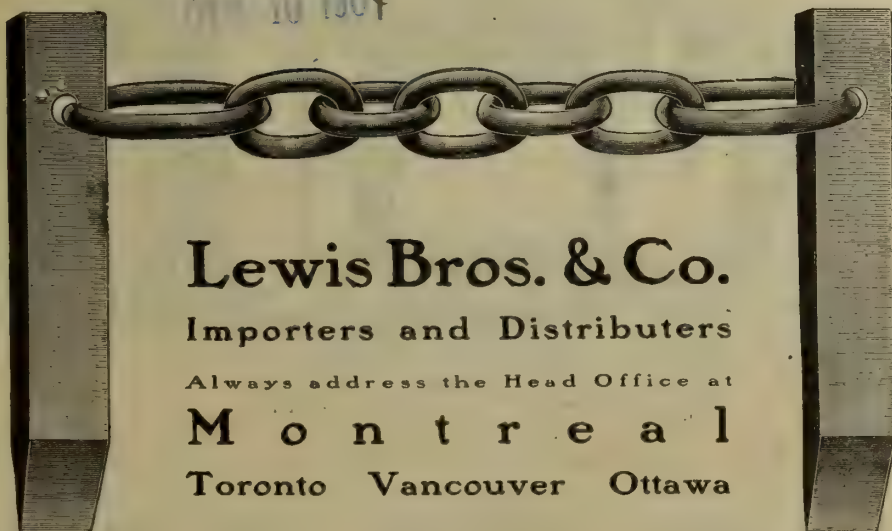
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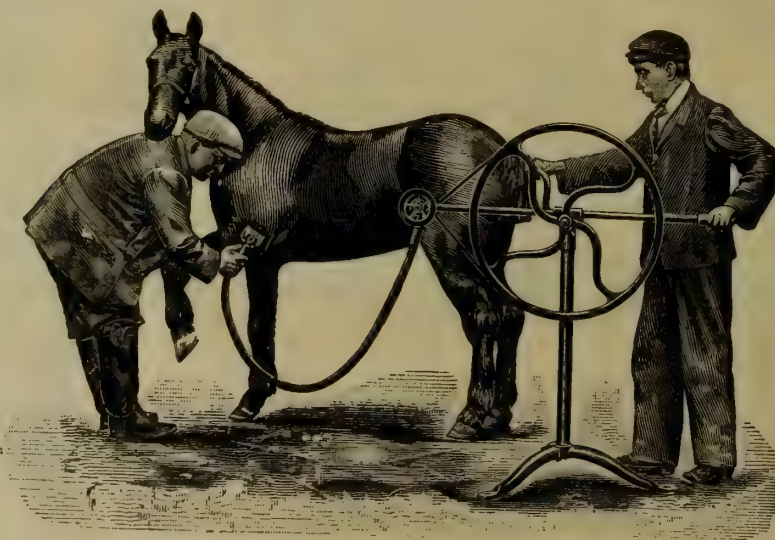
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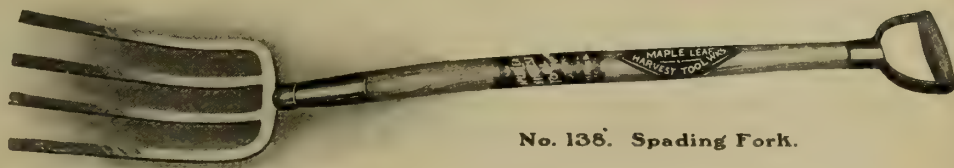
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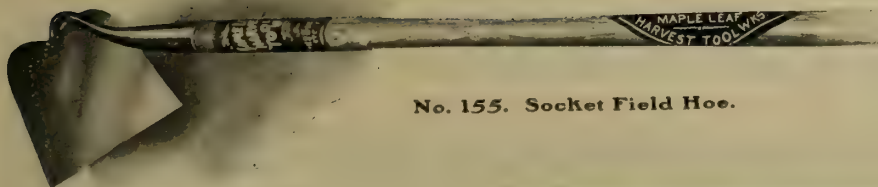
No. 136. Spading Fork.



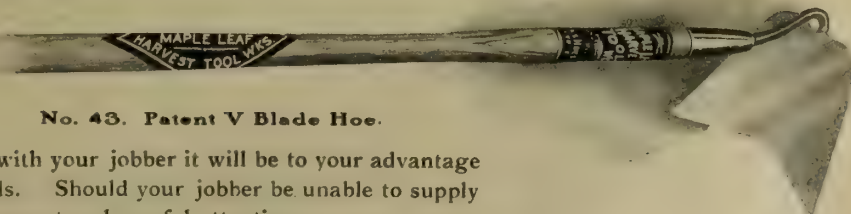
No. 243. Beet Fork.



No. 108. Hay Fork.



No. 155. Socket Field Hoe.

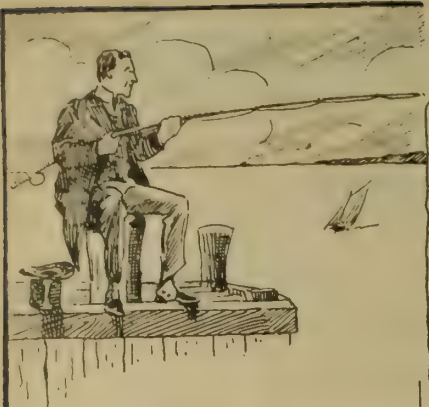


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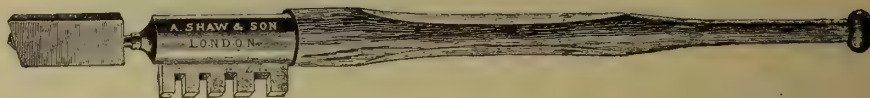
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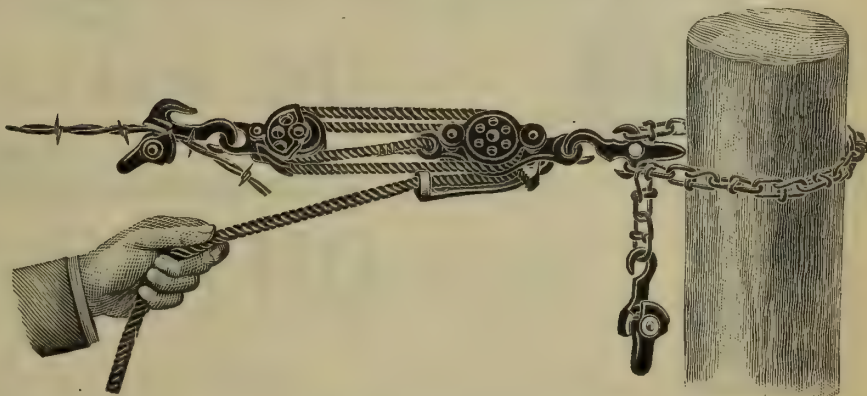
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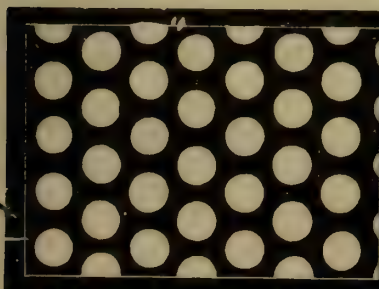
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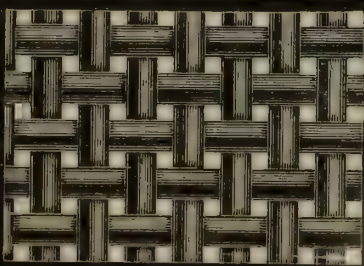


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Manufacturers of **FLATWARE, CUTLERY and
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NEWMAN'S INVINCIBLE FLOOR SPRINGS

Strong, Quick, Reliable, Effective.

Will close a door against any pressure of wind.
Far ahead of ordinary door springs, pneumatic or
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W. NEWMAN & SONS, Birmingham.

YOUR CUSTOMERS'

Names will look better if marked
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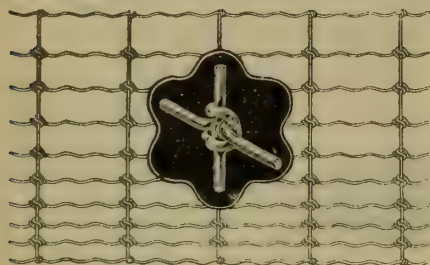
A BRASS STENCIL

15c each in lots of ten and upward.
This is a real bargain.

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IDEAL FENCING

Is Strong and Durable, because Large Gauge (No. 9) Steel
Galvanized Wire is used throughout.

Write for Catalogue.

The McGregor-Banwell Fence Co., Limited,
WALKERVILLE, ONT.

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Sole agents for Man. and N.W.T.

IF YOU INTEND MAKING ALTERATIONS WRITE
US FOR PRICES AND PARTICULARS
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**Hardware
Shelf
Box.**



We can make boxes to fit your present shelving
...THE...

Bennett Manufacturing Co.
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Steel Frame Support.

DAVID MAXWELL & SONS ST. MARYS, ONT., CANADA.

"Maxwell Favorite Churn."

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FEATURES:**

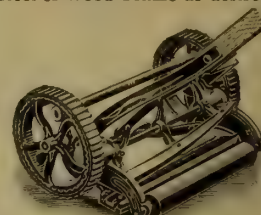
Improved Steel
Stand, Roller
Bearings, and Foot and Hand Lever Drive, and Detachable Driving
Link. Improved for season of 1904. Steel or Wood Frame as desired.

Lawn Mowers.

High and Low Wheels, from 12 in. to
20 in. widths. Cold Rolled Steel
Shafting, Crucible Steel Knives and
Cutting Plate.

If your Wholesale House does not offer you these articles

SEND DIRECT TO US.



MAXWELL MOWER

8-in. Low Wheel.

Wheelbarrows.

In Four
Different
Sizes.

SPECIAL DROP FORGED SPRINGS THE WALLACE BARNES CO., BRISTOL, CONN.

DILLON-HINGE-STAY

Why handle Barb and Coiled Wire at no profit when
you can have a fair margin on our

Dillon Fencing



Got up specially
for the hardware
trade.

Easily put up
and at the most mod-
erate prices.

Write for prices in car or small lots.

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When ordering

BEST MANILA
BRITISH MANILA
or
SISAL ROPE

be sure and insist upon the dealer supplying
our make.

Consumers Cordage
Co., Limited, Montreal

Then you will receive a satisfactory
article without any additional cost.

== **NOW** ==
 IS THE TIME TO PLACE YOUR SORTING UP ORDERS
 FOR

POCKET
KNIVES

TRUE BRAND



CUTLERY

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BEST GOODS

QUALITY GUARANTEED

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E. F. WALTER & CO., 166 and 168 McGill St., **Montreal**



What is Home Without a—

Washing machine? An unanswerable question?

Our New Century Washing Machine is unrivalled as an economizer of fabric, time, and strength. *The operator need not stand.*

Armed with a sample machine, and a good appreciation of its talking points, the hardware dealer can sell a New Century to almost every home. Our catalogue tells all about it. Send for it.

THE DOWSWELL MANUFACTURING CO., Limited, - HAMILTON, ONT.

Kemp's Nickel-Plated Copper Tea Kettles



"ROYAL" Pattern

Double seamed
spout.



"ONTARIO" Pattern

Handle rod in
one piece.

Well finished
throughout

WE SHIP PROMPTLY

KEMP MANUFACTURING CO., TORONTO, Canada

OUR NEW GOVERNOR-GENERAL

A STRENUOUS BUSINESS MAN

By W. T. STEAD in Review of Reviews.

ALBERT HENRY GEORGE GREY, the fourth earl, was born on November 28, 1851. He came of notable lineage. His father, General Sir Charles Grey, had been for over 20 years more closely and confidentially connected with the British court than any other man, courtier or statesman. General Grey, second son of the great Lord Grey who carried the Reform Act of 1832, was private secretary to his father while he was Prime Minister of the Crown from 1830 to 1834. In 1849 he was appointed private secretary to the Prince Consort, a post which he held till Prince Albert's death. He was then appointed private secretary to the Queen, and this post he held to his death, in 1870. The private secretary to a king or queen is often a more important person than a Cabinet Minister. He is privy to all the business which a sovereign has to transact. He has access to all the papers. He knows all the secrets, and he is often much more than the private secretary. He is the trusted, confidential adviser of the sovereign. Unlike the official advisers of the Crown, he is appointed for life, and holds his position independent of popular caprice or changes of public opinion. General Sir Charles Grey stood high in the favor of his royal mistress. He was devoted to the memory of the Prince Consort, of whose early years he published a book in 1867.

The new Governor-General for Canada is, therefore, not only the grandson of one of the most famous Prime Ministers of the nineteenth century, he is the son of a man who from 1849 to 1870 occupied a position which made him the personal friend and trusted confidante of the Queen in all the business both of court and of state.

Lord Grey's chief interest in politics has been the maintenance, the extension, and the consolidation of the Empire. His ardent and enthusiastic temperament predisposed him to be a leading spirit among the young optimists who believed that in the union of the English-speaking race there might be discerned the dawn of a new heaven and a new earth.

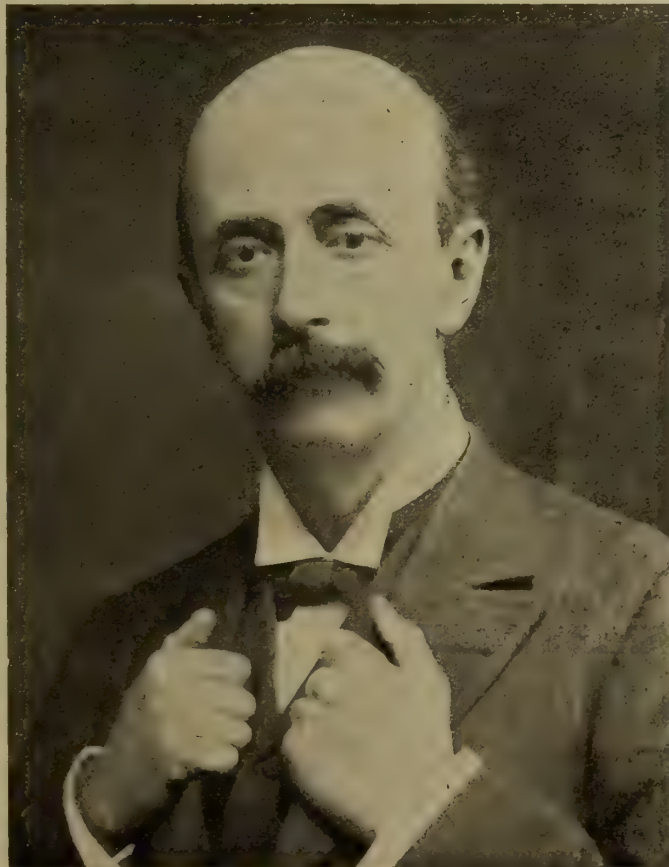
Mr. Rhodes found in Lord Grey a man after his own heart, full of passionate enthusiasm for the Empire, and keen to do his part in the revival of the old Elizabethan tradition of adventure and romance. He became one of the founders of the chartered company, and was thereby committed to a close connection with the destinies of central South Africa. He became a Rhodesian, and he is a Rhodesian to this day.

HIS RECORD IN RHODESIA.

The task which Lord Grey attempted as administrator of Rhodesia in 1896-1898—years of native war and of profound political unrest—did not afford him much experience likely to be helpful to him as Governor-General of the Dominion. The Rhodesians, a handful of white men, were fighting for their lives against overwhelming numbers of savage Matabele. Lord Grey was a novice in South African affairs, and he was necessarily overshadowed by the colossal personality of Cecil Rhodes. He had a divided allegiance. He was the representative of the Crown, as well as a founder and leading spirit of the chartered company. He was an English noble, bearing a name that is famous in the annals of Liberalism. Yet he was Mr. Chamberlain's agent in South Africa. After he returned home, he became a director of the South African Company and a trustee and a joint heir of the Rhodes estate under Mr. Rhodes' will.

AS A PEACE CRUSADER.

When the Russian Czar launched the Peace Rescript, Lord Grey threw himself heartily into the popular agitation which secured the meeting of the Hague conference. As Lord-Lieutenant of Northumberland, he presided over the peace meeting in Newcastle Town Hall at the beginning of 1899. That this did not stand in the way of his presiding, a few months later, over a meeting in the same place clamoring for the dispatch of more troops to South Africa to compel Mr. Kruger to climb down, is a fact thoroughly in keeping with Lord Grey's impulsive enthusiasm for every cause that seems to represent a struggle toward a loftier ideal. Lord Grey, as is



Lord Grey.

now well known, took little part in the annexation of the republics. Nor beyond supporting the importation of the Chinese has he interfered much in the settlement of the conquered territories. He has been chiefly interested in the affairs of the vast territories acquired and still administered under the charter. He has taken and still takes a keen interest in the development of the latent wealth of this great estate. His hopeful disposition enables him to labor on cheerfully where others would be apt to abandon their task in sheer despair.

CO-OPERATION AND TEMPERANCE.

In home politics, Lord Grey has devoted himself with untiring enthusiasm to two great causes—the cause of co-operation and the cause of temperance reform. He has for many years been the most brilliant and highly placed of the advocates of co-operation. Co-operation in all its forms, as the practical method of realizing voluntarily the ideals which the Socialists can only attain through legislation, has been always near his heart. Distributive co-operation, productive co-operation, co-partnership in every kind of industry, have always found in him a zealous and a sagacious supporter.

In the advocacy of co-operation, he was but one among many. In the work of converting the drink traffic from being a source of local demoralization into a source of local amelioration, he is the leading spirit. Many people, Mr. Chamberlain not excepted, had, from time to time, been fascinated by the working of what was at first known as the Gothenburg system of dealing with the supply of intoxicating drink. The Bishop of Chester had formed a small company to manage a public house for the public good, and not for private profit. At this stage of the discussion Lord Grey came into the field. A personal experience,

by which he found that a licensing authority gave away for nothing monopolies which were salable the day after the grant for £10,000 (\$50,000) opened his eyes to the frightful extravagance and waste of the existing system of licensing. He became the apostle of "The Bishop of Chester's Trust." What might have been a mere local experiment was taken up all over the kingdom. Everywhere Lord Grey was to the fore. He argued, pleaded, persuaded, until at this moment public house trusts have been formed in nearly every English county, and every month sees an addition to their number.

PUBLIC CONDUCT OF THE LIQUOR QUESTION.

The essential principle of Lord Grey's trust public house is that the profits arising from the monopoly created by the public authority should be devoted to purposes of public usefulness, and not to build up fortunes of private individuals. The *modus operandi* is as follows: A number of the most influential and public-spirited persons in a given district meet together and agree to form themselves into a trust for the purpose of acquiring a license for the sale of intoxicants and the supply of refreshments. They subscribe the capital needed, the maximum dividend on which is 5 per cent. Then they either buy an

old license or get a new one, and set up in business on the following lines: The public house is placed under the management of an agent of the trust, whose salary is not affected by the increase of intoxicants sold. He receives, however, a commission on all non-intoxicants supplied to the public, whether in beverages or in food. He has, therefore, a personal interest in pushing the non-alcoholic side of the business, and he has no inducement to construe liberally the law against supplying intoxicants to the intoxicated. Further, the trust being more intent upon social improvement than upon earning a dividend, the trust public house is more of a local club house and less of a liquor bar than any other licensed house. When the year's balance sheet is presented, a dividend not exceeding 5 per cent. is paid to the shareholders, and the balance is then devoted to the various local improvements. A footpath may need to be repaired, a public playground secured, books may be wanted for the library, a water fountain may be needed, a hospital may require assistance. The surplus profits of the trust public house form a modern *Fortunatus'* purse from which grants can be made to all manner of deserving objects of public utility and public charity.

HON. CLIFFORD SIFTON ON RECIPROCITY.

(Extract from interview by E. W. Thomson in Toronto News).

YOU suppose our west to be a unit in favor of reciprocity in naturals. It is not so. Certainly, I used to favor such reciprocity. But I am not like some people we both know—I can learn. I do not say that the Canadian west, and myself, might not approve free, or much more free, exchange of natural products with the States. It depends on what arrangements could be made for permanency of the arrangement. We could not afford to risk much on a market that might be hastily closed to us.

NO SHORT TERM TREATY.

Canadians have not forgotten the lesson of 1866, when Washington abrogated the reciprocity treaty of 1854. This country had got into the way of adapting its production, and very largely its entire business, to the American market. Canada was flattened out for years by the abrogation of the treaty. No more of that for me. We have

adapted our production and business to the independent, self-sufficient policy that has been pursued for many years now. Does anybody of good sense imagine we will give that up, and undertake a re-adaptation to the United States market on a bargain extending over any short term, or which could be done away with by a few years' notice from Washington? No.

Could the necessary permanence be secured? I have not given so much thought to that as would warrant me in replying yea or nay. What use in studying a question that is unlikely to come up soon. Washington has not shown any distinct intention of proposing a conference on the only sort of reciprocity that Canada could judiciously discuss. I am not one of the infallible people who know everything by instinct. Time enough to talk about how to secure permanency of reciprocity in "naturals" when Washington and Ottawa shall have

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited.
HAMILTON, ONT.

discussed things, and got to an agreement that they would both like to make permanent.

WEST AND FREE WHEAT.

As to wheat. I am far from sure that the west cares to have the American duty taken off wheat. You stare. But consider that our interest is to have the first-class wheat of our west milled in Winnipeg or Rat Portage, instead of Minneapolis. We want to export it as flour, as much as possible. That will give us two profits. It is true that in present circumstances, with Winnipeg not fully developed as a flouring point, Minneapolis can offer a trifle more for our wheat during a few weeks after harvest than Winnipeg can. But it is just as cheap to haul flour to the sea from Winnipeg or the Lake of the Woods as from Minneapolis. It will be cheaper all the year round pretty soon. I mean as soon as we get our waterways improved to the utmost, and our almost dead level first-class national transcontinental railway built. That completion is only a few years ahead. So we do not need, and do not much wish to have our wheat growers feeling dependent on Minneapolis prices. At any rate the price paid for wheat is really made in Liverpool, just as the Minneapolis operators told you last Fall on the floor of their wheat exchange. I am not saying that there would be no early profit to our wheat growers if the United States duty of 25c a bushel on wheat were removed. But it is not the height of wisdom to want the American duty taken off when one of its effects is to promote flour milling in the United States, and hamper it in Canada. Of course, Minneapolis might be enabled to grind our wheat in bond, the United States duty remaining, but grinding in bond is a bit bothersome and slightly expensive. No, I see little reason to suppose we would wish, in any case, to put an export duty on wheat for the purpose of preventing Minneapolis from grinding it. The millers there have got to have it—that's the nub of the situation, and Washington will have to take off the duty sooner or later, or let Minneapolis lose its flour trade. Why should Canada care to give much in the way of reciprocity to have the duty taken off presently?

U. S. TRUSTS POWERLESS.

No, I do not take much stock in the notion that the American milling interest could dominate the wheat growing interest in our west under complete reciprocity. Trusts cannot work in Canada to the detriment of farmers and consumers. Our political system is such that we can knock out any trust in short order as soon as the people want it done. Here Parliament has unlimited powers to regulate such concerns. You

saw what it did with the American Tobacco Co. last session? Compelled them to give up their monopoly system by arranging to take away their license to manufacture if they should prove defiant. Well, an omnipotent Parliament can get at any trade combination in any way it chooses. We are not made impotent to defend the people against monopolies by such a complication of written constitutions and intricate legalities as favor monopolies in the States.


Yes, there might be some slight temporary gain to our west if there were complete reciprocity in natural products other than wheat. But that gain is scarcely worth bothering about, much less binding ourselves for, and especially it is not worth the adapting of our business to a treaty that might be abrogated at short notice.

TARIFF ON IMPLEMENTS.

As to the advantage our west would gain by taking the duties off American

agricultural machinery, and other United States manufactures, I tell you that the people of our west are willing to stand the present Canadian tariff. The elections surely showed that. They are not kicking. This Government has got the people of Canada everywhere to recognize that the country can't be developed without a tariff, and the west is aware of getting a fair share of the expenditure that customs taxation enables us to make.

Reciprocity is not precisely in the line of our transportation development. The preference to Great Britain is. We have pretty well overcome the difficulties of geography. By the canals and waterways and railways that we have constructed and developed our commerce flows along lines of latitude; not northward and southward. We are fixed now to deal with Europe, and especially with Great Britain. There is an unlimited market there for pretty much everything we raise.



Full Line Profits

If you are an S. W. P. Agent and do not handle the *Sherwin-Williams Full Line* you fail to get all the profit and all the reputation that goes with The Sherwin-Williams Agency. Sherwin-Williams Paint Specialties are every one the best that can be made for the purpose—they are all *best quality*. The reputation of S. W. P. helps sell the specialties and the specialties help sell S. W. P., for specialty sales that give satisfaction mean bigger house paint sales in the future.

Write us for Full Line information.

THE SHERWIN-WILLIAMS CO.
PAINT AND VARNISH MAKERS

Canadian Headquarters and Plant: 639 Centre St., Montreal.
Warehouses: 147 Bannatyne St., E. Winnipeg, Man.
86 York St., Toronto. 1225

WILL ADHERE TO PREFERENCE.

It is far from sure that reciprocity with the States would consist with the preference to Great Britain. We are not likely to stop that. It pays us well. If England should reciprocate it would pay us still better. I am not predicting she will. We can get along finely anyway. But, mind this, our interest is to favor the country that is naturally and politically inclined to promote our interests, to send us immigrants, to lend us money on easy terms, to watch our successes with rejoicing. Best to child is mother. For all that, I am not saying that it would suit Canada to enter into any rigid trade agreement even with Great Britain. If she chooses to give us a preference, well and good. If not, all right. To get one we might possibly bind ourselves to something, but I am not sure we would. No use balking before one sees the cart. That is as good regarding the reciprocity as regarding the Imperial preference business.

CANADA IN GOOD SHAPE.

Fact is, the only right way to size up the mind of Canada is to consider that we are getting along prosperously, that we are seeking no favors from any quarter, that we do not seem to need any, that our inclination is all to hoe our own row, or paddle our own canoe, that we are a business Government for a business people, which implies that we are not going to throw any good thing away if it be tendered on conditions that we can honorably and profitably accept.

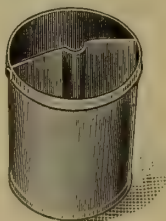
A 2 IN 1 FREEZER.

An ice cream freezer which can make two flavors at one time has long been wanted and now the idea has seen its fulfillment in the "American" (2 in 1) Twin Freezer, which will freeze two



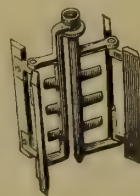
flavors of ice cream or an ice or sherbet and ice cream at one and the same time. The can is divided into two parts by a

vertical partition, which projects above the top of the can and bears against the can lid, so that during freezing nothing can pass from one side to the other.



The dasher has a central shaft which fits in the groove of the partition of can. This dasher carries two sets of scrapers, one set fitting in one side of can and the other set in opposite side. Obviously the can cannot be turned as in old style freezers, because of the partition.

It is therefore swung forwards and backwards, and this movement is produced by a rocking motion of the crank. One scraper of the set in each half of can scrapes when can moves in one direction, and the others in opposite direction. The scrapers are so arranged as to be held automatically against side of can, so that the frozen particles on can are scraped off positively and con-



tinuously. The rocking movement of crank is regulated in its length by stops on either side, thus controlling the backward and forward motion of can so that the scrapers reach from one corner of can partition to that on opposite side.

The freezer is manufactured by North Bros., Mfg. Co., Philadelphia, Pa.

MANUFACTURERS OBJECT.

The Canadian Manufacturers' Association have entered a protest against the G.T.R. through the Railway Commissioners on account of the non-uniformity of rates. It is claimed that shippers in Ontario who desire to export to St. John, cannot get as favorable a rate as is given for goods sent by way of Portland on goods destined for European ports. Shippers are compelled by the Grand Trunk to route their goods by way of the Intercolonial to St. John, and the longer haul makes competition with the C. P. R. short line impossible. They have the option of sending to Portland, or can get Portland rates from Boston. The association claims that St. John is thus being discriminated against and are anxious to have the matter rectified.

IVER JOHNSON REVOLVER GRIP



Combines features of *Simplicity, Utility and Practicability.*
An invention that has met with spontaneous favor.
Its value is immediately recognized by all Revolver users.
Invaluable for accuracy.
Indispensable in preventing weapon from being knocked or wrenched from the hands.
Is detachable and can be readily removed.
Is held firmly in position by three small screws, making it as solid as if a part of the frame itself.
Not sold separately or detached. Obtainable only on

IVER JOHNSON Automatic and I. J. 1900 Double Action Revolvers.

Send for literature giving complete description.

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IVER JOHNSON'S ARMS & CYCLE WORKS,
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H. S. HOWLAND, SONS & CO. LIMITED

HARDWARE MERCHANTS

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**SKATES.****BOKER'S SPRING SKATES.**

No.	Size.
5 Polished.....	7 to 12
9 Plated.....	9 to 12

BOKER'S LADIES' SKATES.

No.	Size
415 Ordinary Quality.....	8 to 10½
1422 Best Quality, Plated.....	8 to 11½
1424 Concave Runners, Plated.....	9 to 11½
447 Light Runners, Plated.....	9 to 10½

BOKER'S HOCKEY SKATES.

No.	Size
530½ Ordinary Quality.....	7½ to 11½
515 Ordinary Quality, Plated.....	7½ to 11½
1535 Ordinary Quality, Full Finish, Plated.....	8 to 12
531 Best Quality, Blued Tops.....	8½ to 11½
532 Best Quality, Plated.....	9 to 11½

**BOKER'S HOCKEY SKATES.
Double Ender.**

No.	Size
4597 Ex. Quality, Plated.....	10 to 12

**BOKER'S HOCKEY SKATES.
with Puck Stop.**

No.	Size
631 Best Quality, Blued Tops.....	9 to 12
632 Best Quality, Plated.....	9 to 12
634 Concave Runners, Plated.....	9 to 12
692 Double Ender, Plated.....	9½ to 12

No.	Size
3692S Best Quality.....	10 to 11½
Tempered Steel Runners, Full Plated.	

For STARR MFG. CO.'S Skates, Hockey Sticks and Pucks see our Fall Catalogue.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

Our prices are right.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

We Ship Promptly.



Every Customer

who enters your store
has uses for

Gillett's Lye

—make yourself familiar
with these uses, and you
will add to sales and pro-
fits.

E. W. GILLETT COMPANY LIMITED
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A. RAMSAY & SON COMPANY

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The Standard Ideal Sanitary Co., Limited

MANUFACTURERS OF

Porcelain Enamel Bath Tubs, Lavatories, Sinks, Slop Hoppers

"MADE IN CANADA."

Porcelain Enamel Bath Tubs,

Porcelain Enamel Sinks,

Porcelain Enamel Lavatories,

Porcelain Enamel Lipped and Plain Urinals,

Porcelain Enamel Slop Hoppers,

Porcelain Enamel Factory Wash Sinks.

THE ONLY MANUFACTURERS OF ENAMELLED WARE IN CANADA

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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Dec. 8, 1904.

P LUMBING and heating goods seem to be seasonable at all times of the year. From early Fall and throughout the Winter heating goods are in good demand, while throughout the entire year, and especially during the

Spring and Summer, plumbing supplies are required. Just now the demand for both is fairly good, although it has fallen off to a large extent from a month ago. Iron pipe and fittings are the most active lines at present. The falling off which always occurs at about this time of the year is said to be much less noticeable than other seasons.

Range Boilers—Hardly as many range boilers are required, nevertheless quite a few orders have been received. Our quotations are as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—This is in demand at all seasons of the year and the first cold snap generally sees a much larger demand than usual. The market is firm. Discount 30 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—Soil pipe and fittings are moving well for this time of the year. Quotations are: Soil pipe, standard, 50 per cent. and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—There is an unusually big demand at present. Discounts on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—Prices are firmer and the market very active. Our quotations are: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto Dec. 9, 1904.

A N increase in the demand for plumbing and heating goods is noted on this week's market. This change of conditions was unlooked for on the part of the local wholesale jobbers as former years showed an inactivity during this month. Locally present events can be easily accounted for, as the long inactivity caused by the builders' strike this Summer delayed operations. The cause of the country demand is unaccountable, unless it is on account of the large increase in the installments of waterworks systems throughout the towns of Canada. As a result of the present circumstances jobbers are facing the problem of shipping orders on time.

Although the cost of manufacturing solder has increased, no material change has taken place in the selling price. However the majority of wholesale jobbers anticipate an advance at no distant time.

A good trade is being carried on in galvanized iron ranges. These goods are gradually taking the place of the copper range boiler, and to-day 95 per cent. of the orders received call for the galvanized stock.

Lead Pipe—Trade is brisk. Demand has increased, and prices continue unchanged. We quote: Lead, 7c; lead waste pipe, 8c; discount 30 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—A strong demand is current. Prices are firm and unchanged. We quote nominally: Malleable fittings 20 per cent. for American and 35 per cent. for Canadian; cast iron (standard), bushings, 65 per cent.; headers, 60 per cent.; flanged unions, lipped, 60 per cent.; malleable bushings, 57 1-2 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A quiet demand continues with the discount unchanged at 15 per cent.

Galvanized Iron Range Boilers—Trade is brisk. A set price has been quoted on this line of goods, and is as follows: 12 gallons capacity, standard, \$4; extra heavy, \$6; 18 gallons, standard, \$4.25; extra heavy, \$6; 24 gallons, standard, \$4.50; extra heavy, \$6.50; 30 gallons, standard, \$4.50; extra heavy \$6.50; 35 gallons, standard, \$5.50; extra heavy, \$7.50; 40 gallons, standard, \$6.50; extra heavy \$8.50; 52 gallons, standard, \$10; extra heavy, \$13; 66 gallons, standard,

\$16; extra heavy, \$19; 82 gallons, standard, \$19; extra heavy \$22; 100 gallons, standard, \$24; extra heavy, \$29; 120 gallons, standard, \$28; extra heavy, \$35.

Iron Pipe—Trade continues brisk. The market is steady. Our quotations are: Black, 1-4 inch, \$2.03; 3-8 inch, \$2.14; 1-2 inch, \$2.29; 3-4 inch, \$2.87; 1 inch, \$4.12; 1 1-4 inch, \$5.65; 1 1-2 inch, \$6.75; 2 inch, \$9. Galvanized, 1-4 inch, \$2.86; 3-8 inch, \$2.97; 1-2 inch, \$3.14; 3-4 inch, \$4.02; 1 inch, \$5.77; 1 1-4 inch, \$7.87; 1 1-2 inch, \$9.45; 2 inch, \$12.60.

Solder—Prices continue unchanged. Market is strong and prices are very firm. Bar solder, half and half, guaranteed, is quoted at 18c and wiping solder at 17c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 51-2 feet, 21-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 21-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D, A quality, \$5.40; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

German Sanitary Regulations.

ACCORDING to the Plumber and Decorator of London, England, the sanitary regulation of German cities, like most German regulations, is in the hands of the police officials, who are advised by municipal physicians, and in cities of 5,000 inhabitants or over, by a sanitary commission composed of representatives of the city government, physicians and the chief of the local police. A real medical officer of health, in the English acceptance of the term, does not seem to exist in Germany. Concentration of authority in the hands of the police leads to personal rather than technical oversight. In Berlin, if a house proprietor finds any of his tenants maintaining dwellings in a filthy state, he is bound to warn them to clean up, and, if they fail to comply, to turn them out without any further ceremony. Should the landlord neglect his duty, an officer of the sanitary department will make a visit upon complaint of neighbors, and if he finds the house filthy, clean it at the landlord's expense. This method of dealing with persons of uncleanly habits is fairly effective in preventing the spread of disease.

The Scarcity of Tinsmiths.

THE scarcity of tinsmiths, especially of good ones, is a subject that interests every employer in the business at the present time. When the changed conditions made it no longer profitable to make tinware in every stove store and tin jobbing shop the idea seemed to prevail that the tinsmith's trade was no longer the desirable calling that it had been, and boys and young men were not longer apprenticed to learn the trade in such numbers

as before. Consequently, as the old tanners have dropped out of active service there has not been a sufficient supply of younger men to take their places and fill the gaps made by their retirement.

If no new uses had been found for sheet metal it is very likely that the number of tinsmiths now in harness would be sufficient to do all the work in their line without very much delay, even during the busy seasons. But since the making of tinware in the old way became unprofitable a great many new uses have been found to which sheet metal can be put, so that the trade requires as many, if not more, men to do the work than ever before. There are several other reasons why more boys are not learning the trade besides the fear that the trade is on the decline. One of them is that most tin shops do a general plumbing business nowadays, and this line of work seems to appeal to the average young man more forcibly than does the tinsmithing branch. Just why this is so it is hard to say, unless it is because of the long established idea that the plumber is a highly paid artisan and does not have a conscience to annoy him, as other men have. Or it may be that the nature of the work is more congenial to the majority of learners. It is not the intention here to take the extreme stand, as some mechanics do, and say that no man can learn two trades and learn them both well. But it is certainly true that where a boy is working at more than one trade he will have a preference, and will neglect opportunities to perfect himself in the one he likes least in order to give more time to the other.

Another reason why a scarcity of expert workmen exists in this line is because the method of teaching the trade is very different from the one followed in former years and is not as thorough, for the reason that employers do not feel as much responsibility in the matter as they did when they obligated themselves to teach a boy the trade in a stipulated number of years. In those days the apprentice worked for very low wages, it being understood that he was receiving pay for his work in the technical knowledge he was acquiring and not in money. But in these days most employers do not care to take apprentices in this way, but prefer to pay in cash just what a helper is worth to them, and then leave it to the young man himself to pick up what knowledge of the trade he can. The principal reason why employers feel this way is because of the fact that most apprentices become dissatisfied after a year or two and think they are entitled to more wages than their agreement calls for, regardless of the fact that valuable time has been spent in teaching them what they know, with the expectation that they will repay the employer later by giving him the benefit of their increased skill at a comparatively low rate of wages.

Considering the inconvenience that many employers have experienced during the past few years in not being able to get competent help to do the work, which has been, and promises to be, unusually plentiful, it would seem as if some system should be devised for teaching the trade to young men in so thorough a manner that when their

term of apprenticeship is up they would be fully qualified to perform the work in their line. It is well known that a mechanic does better work, or, at least, his work is more satisfactory, in the shop where he received his training than in one where the general run of work is strange to him. For this reason a shop employing a force of men who are acquainted with the customers and the peculiar nature of the work done in that shop will be able to move the work along with less friction than one that employs men whose knowledge of the trade was gained in some other part of the country.

At the present time the tinsmithing, or, more properly speaking, the sheet metal, trade offers a good opening to the young man who is willing to apply himself to the task of mastering the details of the business. Work in plenty can be found for those of only moderate ability. As for first-class men, there seems to be hardly any supply when compared with the demand. It might be a good idea for some of the men engaged in this business to stop making fourth-class lawyers, physicians or insurance agents of their sons, and instead make of them first-class tinsmiths.

Ventilation of Office Buildings.

THE discomfort due to lack of ventilation in large office buildings in the Winter season, when the customary methods of heating are direct radiators, has evidently been the inspiration for the following article by George Hill, reprinted from the Architectural Record:

The heating of offices is well enough, but the ventilation is very largely neglected. These two are so closely related that they should be considered together. Present practice is to provide a radiator for heating controlled either by hand or by thermostat for each office unit, and to provide ventilation by opening the window, the foul air passing into the hall. The ideal arrangement would be to introduce a fixed amount of warmed, fresh clean air to each office unit at any determined temperature automatically. In fact, there may be said to be no existing way of properly warming the bulk of the offices of an office building without the constant use of a little knowledge, intelligence and trouble. The foul air can be drawn off into a vent shaft placed at any convenient place. For banking and similar large rooms on lower stories the standard hot air heating system, with either exhaust or blast fans, works with entire satisfaction and but little loss of valuable room, but the air inlets should always be 8 feet above the floor and at least 5 feet from the ceiling, and the outlets for foul air should be near the floor and large enough to have a very low velocity (less than 10 feet per second). Then the occupants will not feel a draft. The inlet radiators must not be high up, because it is at times necessary to introduce the fresh air at a temperature lower than 100 degrees F. when it feels cold and produces the effect of a draft. If the fresh air forms a current flowing always in one direction, surfaces near it will get very dirty, and we are therefore compelled to keep away from the ceiling.

PIPE THAT IS PIPE.

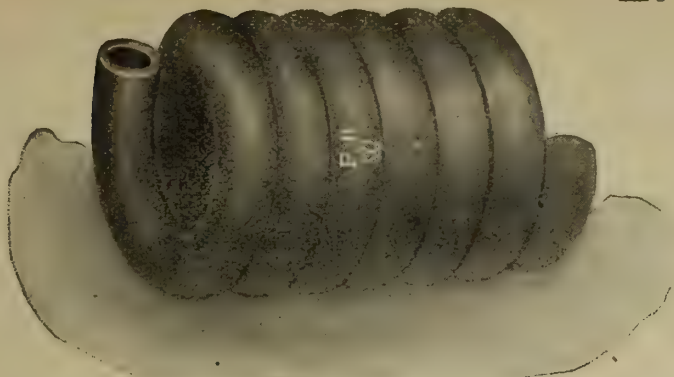
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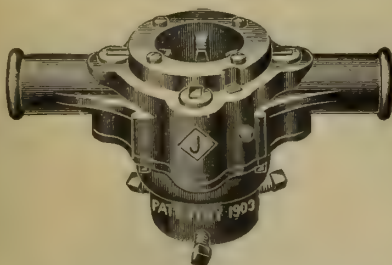
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HESPELER - - - ONTARIO

Building Permits.

TORONTO.

Wm. Eldridge, dwelling, No. 40 Foxley street, \$1,500.

J. M. Purvis, dwelling, No. 9. Saulter street, \$1,500.

F. Diver, addition to warehouse, No. 70 Pearl street, \$2,000.

P. Beamer, dwellings, Christie street, near Barton avenue, \$600.

L. T. Morris, addition to dwelling, No. 153 Park road, \$3,000.

A. E. Rea, factory, Spadina avenue, near King street, \$35,000.

S. Lightfoot, dwelling, Dundas street, near Roncesvalles avenue, \$2,600.

J. E. Finkle, dwelling, West Lodge avenue, near Marion street, \$1,200.

Wm. Pudifin, dwellings, Gladstone avenue, near College street, \$12,000.

I. W. W. Plewes, dwelling, McMaster avenue, near Rathnally avenue, \$3,000.

Vokes Hardware Co., machine shop, corner of Jarvis and Esplanade streets, \$800.

Jas. Dilworth and W. Braybon, dwellings, Albany avenue, near Wells street, \$6,000.

J. McGonegal and W. Ward, dwellings, Langley avenue, near Howland road, \$2,600.

Gutta Percha & Rubber Co., addition to office building, corner of Yonge and Wellington streets, \$10,000.

MONTREAL.

G. Palleren, Frontenac street, \$1,000.
Jos. Alix, St. Hubert street, one house, \$1,500.

J. F. Gager, St. Denis street, one house, \$3,500.

H. A. Egan, Prince Arthur street, one house, \$4,000.

Starke Cooperage Co., King street, alterations one house \$1,000.

Rev. Sisters of Hotel Dieu, De Bresoles street, alterations on warehouse, \$55,000.

BRANTFORD.

P. Senn, dwelling, Peel street, \$1,600.
J. Parsons, dwelling, Huron street, \$950.

S. A. Wheeler, dwelling, Port street, \$800.

R. Draper, dwelling, Port street, \$1,200.

E. Hackett, dwelling, Fair avenue, \$1,100.

Waterous Co., warehouse, Market street, \$2,000.

Dr. Harris, Popplewell, dwelling, Brant avenue, \$3,600.

A. Copeman, dwelling and store, Cayuga street, \$2,000.

B. Lundy, dwelling, corner of Dalhousie and Park avenues, \$1,600.

Building Notes.

Work has begun on the erection of the new Carney saw mill at Owen Sound.

The Canadian Express Co., of Brantford, are building an addition to their office.

Work has begun on the erection of a new planing mill for P. Ament, of Brussels, Ont.

The Hudson's Bay Co., Vancouver, are to erect a large building as an addition to their present premises.

The Methodists of Calgary are erecting a new church, which when completed

will cost in the neighborhood of \$60,000.

C. C. King, architect, Stratford, has been appointed to design and superintend the erection of a new church at Millbank, Ont.

Building contracts to the value of \$60,000 have been awarded by the Town of Preston to contractors during the season of 1904.

Negotiations are in progress for the erection of a new departmental store on Yonge street, north of the C. P. R. tracks, Toronto.

The Montreal monthly building report for November shows an increase of \$103,735 in building operations over the corresponding month last year.

Geo. F. Webb has received a contract to make additions to the Canadian Cordum Wheel Co., of Hamilton, costing in the neighborhood of \$1,500.

The Canadian Pacific, Canadian Northern, the Minneapolis, St. Paul, and Sault Ste. Marie Railways, will erect an international depot at Emerson, Manitoba.

James Steward & Co., of Pittsburg, have received the contract for the erection of the new plant for the Singer Mfg. Co., at St. John's, Quebec, which will cost \$1,000,000.

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Window and Interior Displays

Timely Hints
and Suggestions

Floors, Backgrounds and Other Trimmings.

A PART from what are usually termed the fixtures, there are in most displays auxiliaries which are really of as much importance as any part of the arrangement. Background and floor must be considered; in addition there are often temporary structures built which are intended to enhance the general appearance. About these every window dresser has his own ideas which only too often he uses to the exclusion of all others.

In the decoration of a hardware window the class of goods to be shown must be taken into consideration. For instance the background of a dry goods display would be entirely unsuited to the hardware window and very many of the plans for showing off a grocery arrangement are out of place here. As to the floor, it must be of a substantial nature and not of delicate colors. Strong deep tones and a solid appearance are most suitable.

Plain hardwood is excellent for showing off nearly every line in a hardware store; but this must be varied from time to time. For cutlery and nickel goods a cheap velveteen puffed, or a baize stretched tightly are two of the best materials. Both must be of dark color such as maroon, dark green or purple. The same floor can be used for weeks in succession and provide sufficient variety if judgment is used in the arrangements of the goods. Even cheesecloth has a good effect with a few black lines, but the apparent delicateness of the material tells against it. A heavy dark duck showing no wrinkles has been used. All of these materials, except the cheesecloth, will last for months, and can be interchanged from time to time.

As a background mirrors are valuable both in the rear and at the sides and for variety they can be covered at times with hangings of velveteen, duck or baize. A panelled side is also attractive. In no case should a patterned wall paper be thought of, and indeed any wall paper is inadvisable. A hardware dealer in a large city had lattice work built to fit the sides and back of his window, as well as a piece the depth of the window to be placed in the centre to make two parts of the display if desired. This latter structure sloped down from the back. All of these were removable, the back being in two parts.

In the arrangement of the goods themselves there are numerous devices that offer themselves to the thoughtful window dresser. Dummies or people work-

ing are always of interest and can be extensively used in connection with the display of lines that enter into a hardware stock. A man using an exerciser, a child showing how a skate fastens and unfastens, a woman with a washing machine or dummies in various positions will always attract a crowd.

Backgrounds or decorative adjuncts can be built in the form of arches or pillars, from rough frames, or from empty cartons fastened to a frame work. The ornamental top is simply cut out of cardboard, the whole being covered with cheesecloth or bunting. Boxes of any kind decorated in the same way serve as pedestals or stands. A few pictures

some black material or by ribbons. Back of the framework place the desired article on a stand or suspended from the ceiling, having nothing else in the display. A variation of this is to make a frame like a picture and suspend the article inside it.

This Week's Illustration.

This window was built by A. Karges for Gardner & Co., Woodstock, Ont. The window is three-cornered with a mirror in the side which is so arranged as to show up the background when you approach it from the side.

The half circle at the back and the steps are covered with dark green felt



A Christmas window dressed by A. Karges for Gardner & Co., Woodstock, Ont.

placed through the display or around the walls add to certain windows if not too frequently used and if they are not too glaring advertisements. Cheap, tawdry, inartistic pictures should be avoided. The hardware man is not so liable to err here as the grocer who has them as premiums.

A good scheme for bringing out prominently any special article is to build a framework of the shape of the window front and a couple of feet smaller, place this on its side about two or three feet from the glass and connect it all around with the edges of the glass by means of

which show up the goods to great advantage.

In the centre of the circle there is the head of an Indian made out of hardware, the headgear being made of kitchen knives fastened on by a tape line. The body is made of blue and red colored cloth, which gives it a gay appearance.

The bottom of the window is filled with case carvers and the different linings show up well. Around the circle at the back there are nine electric lights and two at the top. "A Merry Xmas" is set out in spoons.

ELECTRICAL GOODS AND SUPPLIES

Municipal Lighting Scheme.

ON Saturday night, after the poll had been taken to decide whether the Municipality of Westmount would run its own plant, or continue to buy power from the Montreal Light, Heat & Power Co., it was found that those favorable to it numbered 446, and only 111 against. The majority vote represented a value of \$4,250,490, and the minority vote a value of \$1,730,510. This shows conclusively the feeling of the Westmount taxpayers on the question of municipal ownership. They have been paying high rates for their electric power, and feel that it is time for an experiment on their own responsibility. There is no other city in Canada in a better position to make such a trial, although they have no water power available and must develop their power from steam. The outcome of the scheme will be watched with interest by other municipalities. From the time the first announcement was made the Montreal Light, Heat & Power Co. did everything in their power to influence the voters against the undertaking but, as the result shows, they were unsuccessful.

The by-law gives the council power to acquire land for an electric station and incinerator and to erect and establish suitable buildings, works and plant for the purpose of providing electric light to residents and occupants of houses, buildings, and premises in the town, and the proper lighting of the streets and public buildings and places thereof, and may, after the establishment of such buildings, works and plant, maintain the same. These buildings, works and plant shall be as follows: An electric light station, equipped with a plant of a capacity to light the streets and squares of the town, as well as all houses, dwellings, public and private, therein for a population estimated at about 20,000 persons. It makes allowance also for poles, ducts, distributing wires and all necessary apparatus. Ducts for the conveyance of electric current may be placed underground of a sufficient size to admit of wires belonging to or controlled by third parties being placed therein, and for the use of which ducts a rental may be charged as may be agreed upon.

The works are to be so designed as to afford by way of an accessory accommodation for incineration of the garbage of the town, and the utilization of the power resulting from such incineration. The power obtained may also be used for operating electric motors and other purposes.

The price to be paid by consumers shall be fixed by resolution of the council, and may be modified from time to time, but shall always be sufficient to cover cost of operation and keeping apparatus in repair, and of collecting such

price, and 10 per cent. additional to cover any contingencies. Meters are to be supplied by the town, and for each a rental charge of 25c a month will be made. The consumer is to supply all lamps for the complete initial installation in his premises, but the council will furnish an ordinary 16-candle power one free in replacement of each lamp burnt out.

To enable the town to pay for the plant, etc., a loan is authorized and shall be procured in the name of the town, to issue bonds or debentures to the said amount of \$225,000, payable in forty years from the date of their issue, and bearing interest payable on the first days of the months of May and November in every year, at the rate of 4 per centum per annum, at the office of the Royal Bank of Canada, Montreal. The bonds or debentures are to be for \$1,000 each, and may have coupons attached to them for the half-yearly interest payable on them.

To pay interest on the bonds or debentures, and to establish a sinking fund of one per centum per annum on the amount of said bonds or debentures over and above the said interest, a special annual tax assessment is imposed by the present by-law on the assessable or taxable immovable property of the town, and shall be levied each year upon said assessable or taxable property as set forth in the valuation roll in force at the time of the making of the collection roll, which shall be annually made for that purpose as required by law.

Lighting Cigars by Electricity.

HARDWARE AND METAL is in receipt of the following communication, received since the appearance of last week's issue, in which was described an apparatus for lighting cigars by electricity: "Sirs,—In your last week's edition reference was made to an electric apparatus to light cigars. Can you tell me where I can find same, and oblige, yours very truly, G. W. D."

This is made by the Simplex Electric Co., of Cambridgeport, Mass., and no doubt they will give full information regarding same.

In this connection the Electrical World and Engineer gives some interesting facts and figures regarding the cost of operation of such a machine.

It is interesting to figure the cost of lighting a cigar on the basis of 10c per kw-hour. The current consumption is approximately 2.5 amp., so that the energy consumption in a single five-second contact comes to 1,375 watt-seconds, or .382 watt-hours. This is .000382 kw-hours, and the cost of lighting a cigar figures 3.8 mills—a small sum in consideration of the convenience, cleanliness and freedom from the danger of fire, ill-

smelling gases, etc. It is in little ways like the foregoing that electricity is constantly proving more and more useful in everyday life, as well as in larger fields of power work. The cover of the box is perforated to allow the heat of the arc and the cigar smoke to readily escape. A particular feature of the apparatus is its non-consumption of current except when the thumb lever is depressed.

The Smallest Motor in the World.

The smallest electric motor in the world is described by the Street Railway Review, as being built by a watchmaker whose work has trained him to handle delicate machinery. It was made with all the exquisite care required in making a motor that moves with all the regularity of a big machine, and yet is so small that its owner wears it as a scarf pin. Viewed from a little distance the article has the appearance of a very valuable and rather a curiously designed pin. It is only when standing near to it that its nature can be discovered. The first thing to attract attention is the buzzing of the machine, which by means of current obtained from a small battery carried in the vest pocket, is kept in operation at a high rate of speed with a noise like a bee buzzing.

GAS PLANT ECONOMICS.

Recently considerable data has been collected by one of the engineers of Power and Mining Machinery Co. relating to the subject of the relative cost of power by steam production and by producer gas. Taking an average of a great many plants in operation, it was found that the cost of fuel in a steam plant, operating ten hours per day, was \$146.02, being 33.96 tons of coal at \$4.30 a ton. In the case of gas engines and producer gas, 7.72 tons of coal were consumed, which at \$4.30 a ton amounts to \$33.19, which means a saving per day of \$112.83, and an annual saving of \$41,182.95. Another strong point brought out in favor of the gas producers, was that they could be used on hard of soft coal, wood, or coke, the change being made without any interruption.

We make Electric Fixtures, Sockets and Cut-Outs

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

NO MORE DUST.

This is the heading on a booklet issued by the Milwaukee Dustless Brush Co. Every hardware merchant should be well informed on all such articles which are placed on the market.

The brush has a steel reservoir back, and is not only dustless but is very neat and handsome in appearance. The reservoir holds a supply of kerosene or



coal oil, which moistens a specially prepared row of fibre along the centre of the brush. This kerosene also serves as a disinfectant.

It is fitted with an adjustable arrangement by which the handle can be set instantaneously at any angle desired. The brush will retail at about the same price as an ordinary brush. Full information will be given by writing M. N. Dafeo, 29 Colborne street, Toronto, mentioning Hardware and Metal.

A NEW FIRM.

George W. Bowers, of Waltham, Mass., the manufacturer of the Bowers file and tool holders, and thief-proof cabinets, has been succeeded by the George W. Bowers Mfg. Co., of which R. S. Earhart is secretary and manager. The Bowers file and tool holder in a most serviceable invention, holding forty-seven files or tools, saving time, space, and money. It costs only \$1.

NEW BRANCH FORMED.

Another section of the Canadian Manufacturers' Association was organized this week in Montreal, with the title of the "Montreal Linseed Oil, Whitelead, Paint and Varnish Section of the Canadian Manufacturers' Association."

The officers of the section are Robert Munro, chairman; E. Liersch, vice-chairman; E. H. Cooper, secretary. The executive committee are A. Ramsay, J. S. N. Dougall and H. P. Livingstone.

FOR BRITAIN'S MARKETS

I have unequalled facilities for selling Canadian manufactured goods in Great Britain and Ireland, and would like to hear from Manufacturers of General Hardware, Woodenware, etc., who seek direct "Representation" in its fullest interpretation. Have had 20 years experience amongst the Best British Buyers, and have a business connection which is unequalled. I know exactly their requirements and can satisfy any firm as to my Standing, Abilities, Business Methods and selling organization.

Will be in Canada during January and February next. In the meantime shall be glad to answer enquiries and make appointments in advance. Address in first instance:

WALTER P. NOTCUTT, c/o "Hardware and Metal," Toronto or Montreal.

Montreal Steel Works, Limited

AGENTS FOR

THOS. FIRTH & SONS., LTD.
SHEFFIELD, ENG.

Tool Steel Axe Steel Double Shear Steel Blister Steel
Firth's Speedicut High Speed Steel Pivot Valve Steel Files, Etc.

Canal Bank, Point St. Charles,

MONTREAL

WE WANT AGENTS

Among the Stove and Furnace dealers of Canada for

The "ECONOMICAL" HOT WATER Boiler

—designed after 16 years of practical acquaintance with installing hot water boilers of every make ever sold in Canada.

Send for Booklet that describes the Economical.

P. GIES, Founder, BERLIN, ONT.



FOR

Brand New Electrical Toys

AND

Electrical Christmas Novelties

EVERYTHING ELECTRICAL.

TRY

SEND FOR NOVELTY CATALOGUE NO. 20.

The Sayer Electric Co'y, 10-14 Beaver Hall Hill Montreal, Que.

BANK OF MONTREAL.

Proceedings at Eighty-Seventh Annual Meeting of Shareholders—A Satisfactory Report—Past Year has Been Prosperous one for Dominion—Election of Directors.

The eighty-seventh annual general meeting of the shareholders of the Bank of Montreal was held in the Board Room of the institution, at noon, December 5.

There were present: Hon. Sir George A. Drummond, K.C.M.G., vice-president; Sir William C. Macdonald, R. G. Reid, Hon. Robert Mackay, Messrs. G. F. C. Smith, George Durnford, James Skeoch, Henry Dobell, C. J. Fleet, K.C., George Filer, Henry Morton, R. B. Angus, M. S. Foley, B. A. Boas, F. S. Lyman, K.C., Angus W. Hooper, Percy R. Gault, Thomas Irving, J. Scott and John Morrison.

On the motion of Mr. R. G. Reid, Sir George A. Drummond, vice-president, was unanimously voted to the chair, in the absence of the president, the Right Hon. Lord Strathcona and Mount Royal.

On the motion of Mr. C. J. Fleet, K.C., seconded by Mr. Henry Dobell, it was agreed: "That the following gentlemen be appointed to act as scrutineers: Messrs. F. S. Lyman, K.C., and G. F. C. Smith, and that Mr. James Aird be secretary of the meeting."

DIRECTORS' REPORT.

The report of the directors to the shareholders, at their eighty-seventh annual general meeting, was then read by Mr. E. S. Clouston, general manager, as follows:

The directors have pleasure in presenting the report, showing the result of the bank's business for the year ended 31st October, 1904.

Balance of profit and Loss Account
31st October, 1903.....\$ 373,988.66
Profits for the year ended 31st October, 1904, after deducting charges of management, and making full provision for all bad and doubtful debts..... 1,609,207.95
\$1,983,196.01
Dividend 5 per cent. paid
1st June, 1904..... \$700,000.00
Dividend 5 per cent., payable 1st December, 1904 700,000.00
1,400,000.00

Balance of Profit and Loss carried forward.....\$ 583,196.01

Since the last annual meeting of the shareholders, a branch of the bank has been opened at Portage La Prairie, Man., and sub-agencies at Armstrong and Kelowna, B. C., and Papineau avenue (Montreal), and Westmount. Sub-agencies at Hochelaga (Montreal), Enderby, B. C., and two at Winnipeg have been arranged for, and will be opened shortly.

The reconstruction of the headquarters building on St. James street is now proceeding, and will be completed in a few months.

All the offices of the bank, including

the head office, have been inspected during the past year.

STRATHCONA AND MOUNT ROYAL,
President.

Bank of Montreal,
Head Office,
31st October, 1904.

THE GENERAL MANAGER.

The general manager then spoke as follows:

Referring to the statement laid before you, the principal changes as compared with last year are, an increase in the deposits bearing interest of \$13,265,000, in the call loans of \$9,143,000, in the current loans of \$6,699,000, and a decrease in the balance due by our own agencies and other banks outside Canada of \$4,114,000.

There is nothing that calls for any special remark in connection with these

On the whole, it may be said that the past year has been a prosperous one for Canada, though there have been special industries which did not participate. Lumber markets have been very disappointing, and the prices for dairy products unsatisfactory. Certain industries have suffered from foreign competition, but on the other hand, some of our important industries are now reviving under more experienced and intelligent management.

The trade of the past year, both domestic and foreign, has been well maintained. Domestic trade shows a slight increase, while foreign trade, omitting specie, reached a value of \$454,642,000, as compared with \$450,040,000 in 1903. One feature of foreign trade may be noted. Exports of domestic products declined in value \$16,000,000, while imports for consumption rose \$18,776,000, making a loss in balance of trade of nearly \$35,000,000 from the preceding year. In the seven year period, 1896-1902, inclusive, the very exceptional condition existed of an excess of domestic exports over imports for consumption, the actual balance in favor of Canada in this period having been \$1,428,000; but in the last two years the condition has changed, and since 1902 imports have outrun domestic exports

THE GENERAL STATEMENT.

Liabilities.		
Capital Stock.....		\$14,000,000 00
Reserve.....	\$10,000,000 00	
Balance of Profits carried forward.....	583,196 01	
	\$10,583,196 01	
Unclaimed Dividends.....	980 01	
Half-yearly Dividend, payable 1st December.....	700,000 00	
		11,284,176 02
		\$25,284,176 02
Notes of the Bank in circulation.....	\$10,925,689 00	
Deposits not bearing interest.....	23,681,366 72	
Deposits bearing interest.....	71,113,046 67	
Balance due to other Banks in Canada.....	162,489 97	
		105,882,592 26
		\$131,166,768 28
Assets.		
Gold and Silver coin current.....	\$ 4,083,672 63	
Government demand notes.....	4,468,798 75	
Deposits with Dominion Government required by act of Parliament for security of general bank note circulation.....	460,000 00	
Due by agencies of this Bank and other banks in Great Britain.....	\$ 3,555,929 34	
Due by agencies of this Bank and other banks in Foreign countries.....	1,112,152 15	
Call and short Loans in Great Britain and United States.....	24,499,623 00	
	29,167,704 49	
Dominion and Provincial Government Securities.....	519,863 56	
Railway and other Bonds, debentures and stocks.....	7,373,367 89	
Notes and Cheques of other Banks.....	2,808,282 61	
	\$48,881,689 93	
Bank Premises at Montreal and Branches.....	600,000 00	
Current Loans and discounts in Canada and elsewhere (rebate interest reserved) and other assets.....	\$81,304,314 28	
Debts secured by mortgage or otherwise.....	252,478 07	
Overdue debts not specially secured (loss provided for).....	128,286 00	
	81,685,078 35	
		\$131,166,768 28

E. S. CLOUSTON
General Manager,

Bank of Montreal,
Montreal, 31st October, 1904.

amounts, except that in the case of the loans and deposits a certain amount of the increase is of a temporary nature and will disappear shortly, but there will still be a sufficient amount to show that our business is steadily progressing. The diminution in our profits is largely accounted for by the low rate of interest ruling in the foreign markets, where we have to loan most of the money we desire to hold readily available. I saw a statement the other day, that in New York not in a quarter of a century has money fallen so low as it did a portion of this Autumn.

by \$55,600,000. In itself this excess may be of small concern. It has probably been much more than overcome by the introduction of capital brought by an increasing volume of immigration, by investments of foreign capital, largely from the United States, in our virgin lands, water powers, forests, and in many other ways. Yet the fact remains that considered alone, the foreign trade balance has turned against us, and to this cause the somewhat less abounding activity of domestic trade may, perhaps, be traced. In the two months of the current fiscal year, for which re-

turns were available, July and August, domestic exports were less in volume by \$4,200,000 than in the corresponding period last year; imports for consumption show a decline of about \$530,000.

Taking a broad view of Canadian commerce, the future is bright with promise. Our population is fed now by an immigration of upwards of 100,000 people annually, and the stream appears to be well turned towards Canada. Production in the Northwest grows apace, the railways are prosperous, a second transcontinental line is on the eve of construction, the reports from the mining districts of British Columbia are more encouraging, a spirit of abiding confidence in Canada pervades our people; and despite temporary checks in the progress of material developments, there is increasing belief that this country has entered upon an era of great and enduring prosperity.

VICE-PRESIDENT'S REMARKS.

The vice-president, in moving the adoption of the directors' report, said:

The statements submitted by the general manager and in the directors' report, so fully place before you the position of the bank that it is unnecessary I should trespass on your patience for more than a few moments with some general remarks.

The handsome and commodious premises in which we are now assembled, and which are now close to completion, have, I am sure, met with your approval as furnishing a worthy and convenient home for the headquarters of the bank for many years to come.

The general manager has referred to one cause of diminished profits, to which may be added the fact that to earn dividends now-a-days a much larger volume of business must be done, though that is only another way of stating the great reduction in the rates for money, and in the charge for banking services which has been going on.

I may again draw your attention to the fact that in 1847, when the bank first occupied the premises on this site, its total assets amounted to \$7,110,000, and this year they reach \$131,160,000.

In reviewing the general condition of the country, it may be noted that the Stock Exchange, reflecting as it does the views of investors, has apparently entered on a period of revival; securities have now a higher range of value, and confidence in the lasting character of this improvement appears to be spreading.

It is evident that any marked increase in immigration, or in the production of cereals, must come from the Northwest. We have there an immense territory, of which the area stated in figures conveys no adequate idea; but taking only that portion to the south of the fifty-fifth parallel of latitude, which, as you know, passes through the north of England, the Government expert estimates that the portion "suitable for cultivation," in Manitoba, Assiniboia, Saskatchewan and Alberta, that is from Manitoba to the mountains, reaches an extent considerably exceeding the total area of the Empire of Germany, while referring to the much larger extent to the north of the fifty-fifth parallel he says: "What proportion of these vast

districts will be capable of the profitable growing of crops is as yet a matter of conjecture."

You are all aware, of course, that the isothermal lines do not necessarily coincide with the parallels of latitude, and these latter only approximately denote the climate, but the fact of the production of the finest qualities of wheat in our territory, as above defined, is established beyond question. You will be able to form some estimate of the possibilities of the future, when I add that as yet less than 4 per cent. of this land has been brought under crop. It is worthy of note, also, that the yield per acre in Manitoba and the Territories exceeds that of every one of the Northwestern states of the American Union, Montana alone excepted.

Striking proofs of progress in this part of the Dominion are everywhere visible. The population of Manitoba and the Territories, which in 1901 was 422,000, became in 1904 870,000.

The homestead entries, which in 1901 numbered 8,157, and represented 1,305,120 acres taken up for cultivation, had, in 1904, reached the number of 31,383, and covered an acreage of 5,021,291; and to this may be added land sold for settlement by companies, bringing the total up to 9,387,501 acres.

The number of immigrants, which ten years ago, in 1895, was 25,788, and for years made little progress over this figure, last year reached 130,329, and is believed during the present year to have largely exceeded that number; but statistics are not yet attainable.

While the evidences of progress are, as already said, most marked in our western territories, the rest of the Dominion has not been standing still. One feature is noteworthy, the number of new manufacturing enterprises springing up all over the country; some of them are essentially Canadian, others are branches of important American industries. It is impossible to give data, even approximately correct, of their extent or number, but I hold in my hand a list of over thirty in Ontario and Quebec, and may say that for three only in this city and neighborhood, sites have been secured averaging about fifty acres each.

OLDER PROVINCES.

Of trade in general I submit the following brief summary, which, taken in conjunction with the remarks of the general manager, may be useful:

DRY GOODS—A fairly good year's business, the woolen industry somewhat better, collections good.

LUMBER—Not so good; the production this year will be reduced, and better prices expected.

PROVISIONS—The export of bacon shows large increase, and considerable quantity of provisions is going to South Africa.

LIVE STOCK—Exports show large decline, prices of cattle being very low.

LEATHER—Good year's business at fair prices.

BOOTS AND SHOES—A very unsatisfactory year, consequent on labor troubles and high prices of material.

GROCERIES—Business reported good and fairly profitable; the farmers reported prosperous everywhere.

DAIRY PRODUCE—Cheese has been

disappointing, but butter has been satisfactory; upon the whole fairly good.

The grain trade of the port shows a marked falling off.

The hay crop of this province has been exceptionally good, and exports fetched remunerative prices.

IRON AND HARDWARE—Not so good as last year, which was phenomenal.

The construction of another line of railway across the continent, about to be undertaken for the Grand Trunk Railway Co., is an event of the first importance.

TRADE OF THE PORT.

The steamship lines have suffered from various causes, the reaction due to the close of the South African war, and the keen competition in rates inaugurated by the continental lines, which largely reduced earnings. This warfare is believed to be over.

The import trade and the passenger business to this port have been up to the average in volume.

The exports of grain and timber show a reduction of one-third to one-half.

The inland craft coming to this port show a heavy decline.

Ship-owners, however, look for better trade next season.

It ought to be noted that importers complain that, considering higher freights and insurance and port charges in the St. Lawrence, as compared with Atlantic ports, there is little inducement to bring goods this way.

The prompt completion of the long-talked-about harbor improvements, with modern facilities for handling goods, the reform of the pilotage and improvement of lighting, are urgently called for, if the advantages due to our geographical position are to yield their due results. In this connection, a point of interest is the announcement of the construction of one or more ice-breaking steamers. About these comparatively little is known, but any experiment bearing on the prolongation of the season of navigation, if seriously entered on, will be watched with an interest commensurate with its importance to the country.

The continuance of the sanguinary struggle in the Far East is, of course, a menace to the general prosperity, but as regards our own country, surveying the whole field, I can see no reason to doubt that, given normal conditions and favorable weather, we are about to enter on a prosperous year.

I beg, in accordance with custom, to move:

"That the report of the directors now read, be adopted and printed for distribution among the shareholders."

The motion was seconded by Mr. R. B. Angus, and after some remarks by Mr. John Morrison, it was unanimously adopted.

Mr. B. A. Boas moved:

"That the thanks of the meeting be presented to the president, vice-president and directors for their attention to the interests of the bank."

This was seconded by Mr. George Durnford, and was unanimously concurred in.

The vice-president having acknowl-

edged the compliment, Hon. Robert Mackay moved:

"That the thanks of this meeting be given to the general manager, the assistant general manager, the inspector, the managers and other officers of the bank, for their services during the past year."

This was seconded by Mr. R. G. Reid, and was unanimously carried, the general manager acknowledging the same.

Mr. Angus W. Hooper moved, seconded by Mr. James Skeoch:

"That the ballot now open for the election of directors, be kept open until 2 o'clock, unless fifteen minutes elapse without a vote being cast, when it shall be closed, and until that time, and for that purpose only, this meeting be continued."

This was unanimously concurred in.

THE DIRECTORS.

The ballot resulted in the election of the following directors:

R. B. ANGUS.

HON. SIR GEORGE DRUMMOND, K.C.M.G.

EDWARD B. GREENSHIELDS.

SIR WILLIAM C. MACDONALD.

HON. ROBERT MACKAY.

ALEXANDER T. PATERSON.

ROBERT G. REID.

JAMES ROSS.

THE RIGHT HON. LORD STRATHCONA AND MOUNT ROYAL, G.C.M.G.

At a meeting of the Board of Directors held the following day, Lord Strathcona was chosen president and Hon. Geo. E. Drummond as vice-president.

Business Men in Parliament

W. F. Cockshutt, M.P., Brantford.

AMONG Canadian industrial cities, Brantford occupies a foremost position, and it is seemly that her representative in Parliament should be a business man, possessing those level-headed, far-seeing and practical characteristics especially evident in men whose lives are devoted to commerce. Mr. Cockshutt, just such a man of business, is well fitted to discharge the duties of a member of Parliament, and to represent his native city at Ottawa.

Mr. Cockshutt is the second son of the late Ignatius Cockshutt, and was born in Brantford in 1855. He attended school at Brantford and at Galt, later proceeding to England, where he entered the produce firm of Thomas Furness & Co., Hartlepool, Durham.

Following this he spent some time in the tea warehouse of Bates, Evans & Co., London, where he completed his business training. On returning to Canada Mr. Cockshutt managed his father's business, which had been founded by his grandfather in 1829, until March 15,

1882, when he bought out the stock and completely refitted the double store — one devoted to hardware and the other to groceries. The former he recently



W. F. Cockshutt, M. P.

sold, but the latter he still continues. His largest interests are, however, centered in the Cockshutt Plow Co., a firm

Have you any call

FOR

**BRASS
STAMPED
LABELS?**



We make these goods in all sizes and designs to order. Let us have your enquiries for Stamped Brass Goods, such as:

Curtain Rings and Hooks,
Mill Band Fasteners, etc.



We will be glad to quote for special lines or submit samples of regular lines.

LOOK FOR THIS TRADE MARK—

J. Nicklin & Co.,

Canadian Agent,
F. P. ROGER, Carlaw Bldg., TORONTO



BIRMINGHAM, ENG.

For Milkmen Stock Feeders Stock Breeders

and all others interested in the feeding of
Horses, Cattle, Sheep and Hogs,
there is nothing to equal

International Stock Food

This is why an agency for this food is sometimes profitable and desirable.

No time like the present for you to write to us. If, on investigation, you don't want the agency, no harm is done. But write.

INTERNATIONAL STOCK FOOD CO., TORONTO.

engaged in the manufacture of plows and other agricultural implements.

Mr. Cockshutt has always been a strong supporter of the Board of Trade both in Brantford and Toronto. He has twice held the presidency of the Brantford board, in 1889 and in 1904, and is a member of the council of the Toronto board. He has three times been selected by the latter board as their representative at the congresses of the Chambers of Commerce of the Empire. Mr. Cockshutt is an eloquent speaker, and his entry into Parliament will add one more to the ranks of the orators.

PERSONAL AND TRADE NOTES.

HENRY BIRKS & SONS, Montreal, diamond merchants and manufacturing silversmiths, have secured the lease of the lower floor and basement of the Cawthra block, corner of Yonge and Temperance streets, Toronto, for a term of 13 years.

The hardware clerks of Brandon have formed a hockey club.

Mr. F. L. H. Sims, manager of the Siche Gas Co., Toronto, was in Winnipeg last week on business.

Mr. A. Nelson, of the firm of Jas. Nelson & Bro., hardware merchants, Windsor, died on November 30.

Mr. Jas. Livingston, ex-M. P., of the Dominion Linseed Oil Co., paid Montreal a business visit this week.

Mr. Brown, of Brown & Semple, plumbers, Brockville, paid a visit to the Toronto wholesale trade last week.

Mr. C. H. Bennett, of the Aurora Hardware Co., Aurora, was in Toronto on December 5, visiting the wholesale trade.

Smart Mfg. Co., Brockville, have purchased property with the intention of erecting a building as an addition to their present plant.

Mr. W. J. White, Strathroy, has accepted a position as traveler with H. S. Howland, Sons & Co., wholesale hardware dealers, Toronto.

The store and stock of J. W. Kernaghan, a plumber of Hamilton, were burnt on December 1. The loss is estimated at \$1,500, and was insured.

Messrs. R. A. Watt and T. A. Squires, both formerly of W. F. Cockshutt & Co., Brantford, are starting a new hardware business in that city.

Vokes Hardware Co., Toronto, have taken out a permit for a new machine shop, to be built on the corner of Jarvis and Esplanade streets, costing \$800.

Mr. James Lindsay, who was until recently a member of the firm of Lindsay & Macpherson, implement manufacturers, London, Ont., died on Dec. 6.

Mr. E. R. Hooker, a traveler with the Geo. White & Sons, manufacturers of machinery, London, Ont., died very suddenly while in Tillsonburg on Dec. 2.

Mr. J. Langieth, president of the American Metal Co., New York, has been elected president of the Grandby Consolidated Mining, Smelting & Power Co.

The managers of the Canadian Westinghouse Co. from Pittsburg, Montreal,

Toronto, Winnipeg and Vancouver, held a three days' conference at Hamilton last week.

The erection of the new plant of the Imperial Wire & Nail Co., Collingwood, has been completed, the machinery set, and the company have started the manufacture of nails.

The Grand River Metal Works, of Galt, are asking the city for a loan of \$3,000, to erect a new building, as the present premises are not large enough to carry on a successful business.

MONTREAL HARDWARE ASSOCIATION MEETS.

THE Montreal Metal and Hardware Association of the Board of Trade held its annual meeting Wednesday, when the following officers were elected for the ensuing year:

President, Mr. Geo. Caverhill; vice-president, Mr. G. A. Kohl; treasurer, Mr. A. A. Brown.

Directors: Messrs. Fred. Bacon, H. J. Fuller, W. S. Leslie, and Thomas L. Paton.

The president, Mr. Geo. Caverhill, presented a report on the business transacted during the year, which was adopted.

Mr. Caverhill was unanimously chosen for re-election to the Council of the Board of Trade as the association's representative.

The annual dinner of the association will be held about the middle of January, and a committee was appointed to arrange for it.

Those in attendance at the meeting were: Messrs. Geo. Caverhill, president, in the chair; James Davidson, George E. Drummond, George A. Kohl, J. B. Learmont, W. S. Leslie, Fred. Lewis, J. C. McCormick, T. H. Newman, Thomas L. Paton, and Wm. Stark.

A \$2,000 FIRE.

A fire which started on the premises of the Weeton Mfg. Co., manufacturers of silver plate ware at 117 Bay street, Toronto, early Sunday morning, December 4, caused considerable damage. The quick arrival and prompt action on the part of the fire brigade prevented what might have been a very destructive fire. The loss is estimated at \$2,000, which was well covered by insurance. The delay caused by the fire was short, and orders are now being filled with the old time regularity.

THEIR SHORT CAREER ENDED.

After a short career of only a few months the Dominion Brass Co., of Port Colborne, has been served with a winding up petition on behalf of the Canada Metal Co., who are creditors of the first named concern for \$330. The petition estimates the liabilities of the insolvent brass company as \$6,000, and their assets as practically nil.

WANT AN AGENCY.

The Queen City Cutlery Co., of Toronto, are anxious to secure the agency for an English house manufacturing carvers and table and pocket cutlery. The Queen City Cutlery Co. cover the Canadian field thoroughly, and could give an English firm good service.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
25 " " 6 months.....	10 00
" " 1 year.....	10 00

AGENCY WANTED.

HARDWARE specialty agency for Winnipeg and the Territories; good connection; references; none but first-class firms considered. Apply Box 199, HARDWARE AND METAL, Toronto. (49)

SITUATIONS WANTED.

EXPERIENCED man wants position inside or as travelling salesman in the hardware, iron and steel business; good references. Box 201, HARDWARE AND METAL, Toronto. (50)

BUSINESS CHANCES.

HARDWARE BUSINESS FOR SALE—In a thriving town in Western Ontario. Satisfactory reasons for selling. Stock new and well bought amounting to say \$3,500, business well established with but one competitor. Apply, Box 197, HARDWARE AND METAL, Toronto. (50)

THE Locators, largest and oldest exclusive business brokers in the west. W. B. Herbert, general manager, Merchants Bank Building, Winnipeg, Man.

HARDWARE AND FURNITURE—We have just listed with us for quick sale an A-1 hardware and furniture business in the heart of Winnipeg. The financial question is now settled for a few years, and all business men are now making money. Why not you? Yours for \$1,500 cash. The Locators, Winnipeg.

HARDWARE—First-class business making \$3,000 per year clear, in our hands; can be handled for \$1,000 cash or will take part payment in real estate; in an excellent location. The Locators, Winnipeg.

HARDWARE—\$5,000 buys a stock in the Northwest; \$3,000 down; balance in 3, 6, 9 and 12 months, 6,000 of a surrounding country population and only one competitor; made \$3,700 last year. This is certainly an excellent opportunity for a young man to get into business with an assured future. The Locators, Winnipeg.

HARDWARE AND IMPLEMENTS—In the Northwest Territory, \$8,200, cash required \$3,000, balance very easy; nice new stock about 200 miles from Winnipeg. This is an excellent opportunity for a live man; good farmers' connection for implements. The Locators, Winnipeg.

FOR above and all other businesses, address The Locators, Merchants Bank Building, Winnipeg, Man. Send for our book of Business Opportunities, containing many excellent opportunities. (50)

About a Horse Nail.

"A little neglect may breed great mischief; for want of a Nail the shoe was lost; for want of a shoe the Rider was lost—being overtaken and slain by the Enemy—all for want of care about a Horse-Shoe Nail."

—Benjamin Franklin, 1758

Just a few words about ourselves and our "C" brand horse nails.

This Company was established in 1865, and we have therefore been manufacturing horse-shoe nails for 39 years. We make nothing else, and are the largest producers of horse nails in Canada; we believe nearly equal to all the other makers combined.

Our "C" brand horse nails are of one quality only—the best that our long experience can produce. We use for their manufacture exclusively a special quality of material, made for our purpose in Sweden, which is the best procurable in the world, or used by any maker of horse nails.

We use the old and well-tried hot forged process, by which the nails are thoroughly forged by special

machines from the nail rods at a white heat, and finished and pointed by a mechanical process used only by us in Canada.

Every nail is hand sorted and examined, to prevent any imperfect nails from entering a box bearing our "C" brand. Every box is therefore warranted perfect and ready for immediate use.

Our nails are of the best designs and proportions for Canadian use. They will drive easiest, and stand more hard usage than any other horse nail made or sold elsewhere.

We solicit your kind preference for the "C" brand horse nails when ordering.

We shall be glad to furnish free samples of our various patterns to farriers or dealers.

CANADA HORSE NAIL COMPANY, MONTREAL.

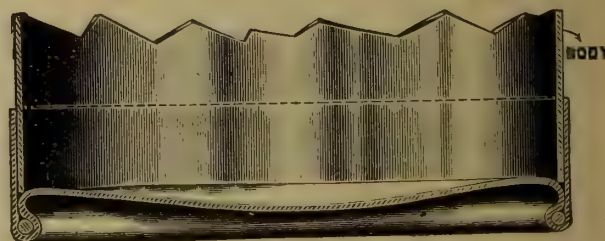
"Samson" Milk Can Trimmings.

Strongest, neatest, most sanitary and only one-piece bottom made.

Has no seams or rivets to corrode and collect dirt.

Every bottom in each size is of an exact diameter. Being stamped out with a die—not spun—there can be no variation as in a bottom made in several pieces.

Requires less solder and work in putting together than pieced bottoms—also wears longer.



Section of "Samson" Milk Can Bottom.



PATENTED, JULY 23, 1900.

The McClary Manufacturing Co.

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

"EVERYTHING FOR THE TINSHOP."

HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,
Montreal.

The MacLean Publishing Co.
Limited

Publishers of Trade Newspapers which circulate in the Provinces of British Columbia, North-West Territories, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, P.E. Island and Newfoundland.

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SECURING HOLIDAY TRADE.

WHILE some of our enterprising hardware dealers are not slow to recognize the advantage and profit of catering to the very desirable Christmas trade, there are a great many who give the matter too little attention. This is one time of the year that a good chance is afforded of attracting women to the store, and they should receive particular attention at the hands of the wide-awake retailer. To have them come to an attractive store is not only going to be the means of getting them to build up a holiday trade, but gives an opportunity of securing the ladies for regular customers. In the past the hardware store has not been looked upon as a place for women, but more and more of late years they are finding their way there, due in a great measure to the efforts of the far-seeing ones who are

awake to the possibilities. In the past when Mrs. Brown wanted anything kept in a hardware store, it was her habit to send John or little Willie to make the purchase. What the enterprising merchant should do is to disillusionize the gentler sex of this idea that the hardware store is no place for them. No more suitable opportunity of undertaking such a campaign is afforded during the entire year than at present.

First of all the store must be made attractive and some well directed efforts made in the direction of a general brushing up to which might be added some seasonable decorations which will accomplish wonders. Holiday goods should be displayed to their best advantage, and of these there should be a good variety. The fact that you want the ladies to come and see you in your store should be advertised freely, and the best means of doing this is through the medium of the local paper. This might be supplemented by neatly worded cards sent to the wives of the best customers, and as many others as possible, both in town and country, informing them of the fact that you are expecting them. The farmer has had a good year and his good wife is sure to do considerable shopping, a large part of which could be directed towards the hardware store, by giving them some little attention when advertising.

This may bring people to a store, but unless they find themselves in a cheerful atmosphere when they are there, a large part of the effort is in vain. If the merchant were to take a leaf from the book of a candidate for local honors and extend the glad hand and a hearty welcome, he will find people returning more often. With a well advertised, attractive store, and alluring display of seasonable goods, neat and obliging clerks and a cheerful and engaging presence, the hardware dealer has a combination that for winning and holding trade is far-reaching and all-effective.

PLACING WIRES UNDER-GROUND.

IT looks as if the initiative were about to be set by the City Council of Montreal, to place all electric, telegraph and telephone wires under-ground. Other Canadian cities will probably follow its example, and it is none too soon. Apart from the danger with which these wires menace the firemen, modern civilization has placed no greater blot on the appearance of our cities than the hideous network of wires crossing and recrossing the streets. Cities on the other side of the border have in many instances long since effected this reform, and Canadian cities should not be slow to follow suit. The matter was brought up by the Mayor some months ago but nothing definite was done at the time. A week or two ago, during the progress of a fire on Notre Dame street, the work of the firemen was greatly hindered, and rendered less effective by the multiplicity of wires at that point. Besides they were in considerable danger from the high tension wires.

The chief of the fire department brought the matter before the council, and the question which had been under discussion for some time was further threshed out. It looks now as though some active steps would be taken in the right direction and it is earnestly hoped by all lovers of municipal reform, that the desired end will be accomplished.

A HANDY THING TO KNOW.

EVERY manufacturer some time or other installs new machines. The usual way of holding these solid is to cut four holes in the cement floor, insert a bolt attached to the machine and fill up the hole with cement. A great improvement in this plan is to use sulphur instead of cement. The sulphur is melted and poured in around the bolt and on cooling becomes hard as rock.

This information was given to us gratis by Mr. Cochrane, manager of the Pittsburg Perfect Fence Company, Hamilton, who had lately installed some new machines, using sulphur instead of cement. We pass this tip on to you.

PUSH THE ASSOCIATION.

RETAIL hardware and stove dealers in Manitoba and the Territories have now an exceptionally good opportunity to place their new western association on a sound basis, which will enable it to do efficient work for their general interest. As was pointed out in these columns in a previous article, the response to the call for members has been particularly gratifying, in view of the fact that the executive have no organizer in the field, but there are still a large number of eligible members in the Northwest who have paid no attention to the invitation extended to them. The partial success of the new western association is now assured, but its complete success can not be assured until practically every eligible member in the Northwest has been enrolled.

A retail hardwareman in the Territories writes the executive, saying that he is thirty miles distant from his nearest opposition, and that he does not see in what way the association can be of benefit to him. But that man is considering only one of the possible benefits of the association. It may be quite true that he is in little danger from unfair competition from retail business rivals, although one cut price retailer can injure the trade for a radius of many miles. But while the association may not be necessary to protect this retailer against his fellow retailers, it may afford him valuable protection against the encroachment of other branches of the trade on business which should legitimately go to him. Are all his customers buying their hardware and building supplies from him, or is it not the case that some of them are purchasing at wholesale? If he makes inquiry he will probably find that a state of affairs exists which is not pleasing to him. He will probably find that his customers are obtaining supplies through improper channels, and it is only through the medium of his association that the retailer can act effectively. Even if the retailer in question finds everything as it should be at present in his own business locality, he should remember the proverbial efficacy of the "ounce of prevention," and act accordingly.

The first annual meeting of the association will be held in Winnipeg on Bonspiel week, and it is earnestly desired by the executive that a large membership be enrolled before that time.

HOT AIR vs. HOT WATER.

A PERSON traveling from place to place is struck by the preference in one city for the hot water heating system and in a neighboring city by the dogmatical enthusiasm for the hot air system. There does not even seem to be any method in their madness, for there is no rule by which one can tell on looking at a map which is the furnace city, which the radiator city. In Toronto and Montreal the preference seems to be for radiators. In Cleveland and Detroit the furnace still holds sway. The manager of one of our Canadian radiator firms made the statement that even the small houses in Montreal were installing hot water systems and a great many No. 2 boilers were used.

Of course both systems have their good points, and we do not know of either a radiator or furnace company which has not all the business it can

COAL TO MEXICO.

IN illustration of the celerity with which trade is opening up between Canada and Mexico, we note Sir Wm. Mulock's approaching visit to Mexico, the completion of the arrangements for direct steamship lines on the Atlantic and Pacific Oceans, and lastly the contract of the Dominion Coal Company to supply Vera Cruz with 25,000 tons of coal.

The manager of that company states that early in October they sent 5,000 tons of coal to Vera Cruz where it was tested by one of the railway systems. This coal proved so satisfactory that the above-mentioned contract was placed. Shipments will be principally from Louisburg during the coming Winter season. This, together with the 75,000 tons contracted for by the Boston and Maine Railway and Halifax and St. John trades should keep the collieries fairly busy until navigation to Montreal opens again.

SEASONABLE GOODS.

THE hardware store has given little attention to the Christmas trade in the past, but on a moment's thought, it will appear that there is no other which offers a better opportunity for supplying the needs of holiday shoppers than does the hardware store. One particular advantage in this direction lies in the fact that the lines handled are useful, rather than ornamental, which gives them an added value to the recipient. A few of the lines that should be stocked and well displayed might be mentioned. They are: sporting goods of all kinds, including hockey outfits, skates, sleighs, etc., tool outfits for the boys, plated ware, silver ware, some well selected sets of carvers, cutlery of all kinds, including sets in cases, sewing sets, with scissors, needles, etc., shaving cases, with razors and supplies, pipes and smokers' sets, besides the thousand and one useful articles that are regularly kept in stock by the trade. In a district that is at all hilly skis and toboggans would be a profitable line.

Mechanical toys and electrical novelties are another line which offer a good field for exploiting, and which have not been undertaken to any extent. It is for the hardware merchant to make a profitable trade in these. There are many other lines that fit in naturally in the hardware business which may occur to the individual merchant, but at all events the Christmas trade is too valuable to be considered lightly, and not to be entered into with an enthusiastic effort on the part of the hardware trade.

SIFTON ON RECIPROCITY.

ON another page of this issue is to be found a pronouncement on the question of reciprocity with the United States from the leader of Western Canadian Liberalism—the Hon. Clifford Sifton. This pronouncement is remarkable in many ways.

First of all it comes from a man who has certainly made a notable success of the immigration department and ad-

vertised the Canadian west as it has never been advertised before. It is natural to expect, therefore, that the policy which such a man promulgates on the subject of reciprocity will be as businesslike and good for the country as the policy which he has so successfully followed in regard to immigration.

In the second place, it will come as somewhat of a surprise to easterners to find that the agriculturists of the west, for the majority of whom Mr. Sifton ostensibly speaks, are by no means in favor of a free interchange of natural products. They are satisfied with present conditions. They are confident that ultimately they will have the whip hand and they are willing to wait until they are approached.

Lastly, one cannot but be impressed with the national and imperial tone of Mr. Sifton's utterance. Canada's self-sufficiency as a nation, the imperial direction in which the channels of her trade are being developed, by rail and canal, are both points on which the Minister lays stress. The belief that the east and west are one, that the east can help the west and the west can help the east is certainly the right policy for Canada, whether it be spoken by Liberal or Conservative.

RUINING AN INDUSTRY.

DECEPTION and trickery in a more or less aggravating form is always to be found in the world of commerce. Seldom, however, has it reached such an extreme as in the case of the gun-making industry in England. It has recently come to light that Belgian manufacturers send their gun barrels to the Birmingham proof-house, obtain the English mark on them, bring them back and finish them in Belgium and then send them all over the world as English-made guns. As a result the manufacturers of gun barrels in Birmingham have been reduced to a few hundreds. Birmingham, once the seat of the gun-making trade, is now simply a place where there is a proof-house, operated for the convenience of Belgian manufacturers, so that they can send out their guns and call them English made.

ANOTHER KEELY MOTOR.

TIME and time again, companies have been floated exploiting some wongeneral public is given a chance to make a fortune. When it is advertised that five dollars invested will make fifty, a hundred or a thousand, there are always people credulous enough to believe it. Without commenting on the fate of get-rich-quick schemes in the past, or soliloquizing on what becomes of the hard-earned money—for it is generally such that the bait allures—the attention of our readers is called to a few facts about a company lately organized that is going to revolutionize power development and make everybody rich.

It might be mentioned in passing that when a person devises anything new in the mechanical or engineering line, or applies an old principle to a new use, the custom is to have it patented if he wishes to have it put to commercial application. If the invention be a machine, or connected therewith, working models are built and tests made to show the practicability of the device. The result being satisfactory, the same is not long in appearing in the technical press, and if it has any direct bearing on industrial progress, all available data is published and discussed at length.

The announcement was recently made of a wonderful invention, but contrary to all custom, and overruling all precedent, it came in the shape of a page advertisement in a Montreal daily paper. The new marvel is a motor whose mission on earth is to create a revolution in any place where power is at present used. This was the first intimation the Canadian public had that any such machine was supposed to exist, and it caused those who had been following the technical journals to rub their eyes, and imagine they had been emulating Rip Van Winkle. The editor had several requests from different parts of the country from would-be investors for advice.

A representative of this paper called at the street and number mentioned on their circular to get some information about the machine from a technical as well as industrial standpoint. It was found to be the office of the company's broker, who took payment for shares, but knew nothing whatever about the physical properties of the motor. He directed the inquirer to another office on a different street where a model could be seen, adding that if it was with a view

to investment they would be glad to show the machine, otherwise they would probably not have time to bother. On arriving at the second office, which was the head office, he was interrogated as to whether he was a probable investor, and assurance being given, was ushered into the sanctum. He was informed that the model had just been taken back to England but that they had a drawing and the machine would be explained from that. An undimensioned tracing was produced and the principle explained, to which no exception could be taken as it resolves itself into a question of thermo-dynamics.

It is an application of the old Joule engine reversed. On one side of this machine is a gas turbine and on the other a rotary air-compressor working on the same shaft. It is a known fact that engineers are at present investigating the gas turbine, but so far with no commercial results. On different questions being asked the gentleman representing the company confessed that he was not a technical man, and that their engineer was at present traveling for his health. The detailed drawings of the machine were locked up in the safe, not to be gazed upon by the vulgar eye. He said they had issued a challenge to the McGill professors, which had not been accepted, to find anything wrong with the machine.

Of course criticising a machine from a single drawing and testing a working model are two different things. The head professor of mechanical engineering had heard of no such challenge, when inquiry was made. Further, it was intimated that another professor had been down to see the machine, and from the drawing thought it all right, but it was finally admitted that he was not very enthusiastic, and did not take any stock in the company. "The fact of the matter," said the company's representative, "is that those McGill professors are sore on us because we would not let them into the company." This is absurd, and as might be expected, was denied it toto by those gentlemen, who are not given to placing themselves in any such position. These are the facts of the case as investigated by this paper's representative.

That such secrecy be observed on a set of drawings purporting to represent a motor about to be placed on the market is unexplainable, and that a company be formed to honestly exploit a machine of which they have no model to show, and on which no tests have been made, is stranger still. In view of this, and the experience above related, our readers are left to draw their own conclusions.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of Hardware and Metal.
232 McGill Street.

Montreal, Dec. 9, 1904

Hardware.

GOD sleighing in the country is having an agreeable effect on the holiday business of the hardware trade. Hard roads and a light fall of snow have made the best of sleighing, being exactly what is required for lively business at the present time. Jobbers report a splendid Christmas trade, which keeps up well in spite of the large orders sent in earlier. Stocktaking continues in full swing, and travelers are still reporting at headquarters. There is little movement in staples. The close of navigation has seen a falling off of nearly all heavy shipments, particularly to distant points, which trade will not resume activity until Spring. Winter sporting goods continue in active demand. Prices remain unchanged.

Hockey Sticks and Pucks—Many hockey clubs have organized within the past week creating an unusual demand for these. Quotations are as follows: Boys' hockey sticks, from \$1.50 a dozen up; men's, \$2.25 to \$3.50 a dozen; regulation pucks, \$2 a dozen; juvenile, \$1.15 a dozen.

Plated Ware and Cutlery—The demand for these for Christmas trade keeps up to a very marked degree. We quote Rogers 1847 goods 45 per cent. off list; case carvers from \$2 to \$10 per set; scissors in cases 90c to \$2.

Skates—It was mentioned last week that this season was to be a record one in this line, and judging from the amount of business since, the statement is well borne out. Rinks have started and city as well as country trade is unusually brisk. We quote: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concave, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concave, \$1.60 a pair.

Axes—Quite a few repeat orders have been received for axes. We quote as follows: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—The demand is fairly good. Our quotations are as follows: Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3, \$1.50 a dozen.

Carpet Sweepers—Christmas trade is

demanding more of these than ever before and a very satisfactory trade has been done. Quotations as before, \$21 to \$31 a dozen.

Sewing Machines—There seems to be an unprecedented briskness in this line, as the activity and big demand for sewing machines continues unabated. Our quotations are as follows: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Food Choppers—Other years the demand for food choppers was generally pretty well over at this time, but considerable activity still exists and many orders are being received. We quote: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Lanterns—There is now every likelihood that no readjustment of the lantern situation will be made until the Spring. In the meantime retailers are getting the benefit of reduced prices. Quotations are: Cold Blast, \$6; No. 0 Safety, \$4 a dozen.

Sleigh Bells—With the advent of good sleighing the demand for sleigh bells has taken a new spurt, and considerable activity prevails. We quote as follows: Brass team bells, rough, \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5 a dozen; nickeled, \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—The retail trade is well supplied with shovels at present and their stocks are in good shape, thus the demand has not been at all large within the last few days. We quote: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount; Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Heavy Screw Hooks and Hinges—Some sizes of these are still scarce and little activity prevails. Our quotations are as follows: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs; the price of the 6, 8 and 10 inch sizes is \$4.25.

Annealed Wire—The market continues dull. Quotations continue \$2.25 per 100 lbs.

Barb Wire—There is no new feature to the barb wire market, which is quiet. We quote as follows: \$2.75 per 100 lbs f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Fence Staples—Little activity pre-

vails. We quote: \$2.65 per 100 lb keg for bright, and \$3 for galvanized; 25 to 50-lb packages 25c extra.

Galvanized Wire—The demand has fallen off to a point that there is almost no stock moving.

Rivets and Burrs—The market is strong with no new features. Discounts continue: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—The slight shortage in screws noted before still prevails. There is some activity, although of no considerable amount. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—No advance has taken place in bolts and nuts, although there is every possibility of this change in the near future. There is little stock moving.

Wire Nails—Wire nails are quoted this week and it might be noted that the price is below that of cut nails, showing the state of the wire nails market to be a very unsatisfactory one. We quote: \$2.20 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Cut Nails—The market is unusually quiet and very little demand exists, particularly in view of the fact that wire nails are quoted at a lower price than cut. We quote as before, \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

Horseshoes—Since the close of navigation the demand for horseshoes has fallen off almost altogether. Prices remain the same. Our quotations are as follows: "P. B." new pattern, base price \$3.50 per 100 lbs.; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—In common with horseshoes there is small activity.

Sporting Goods—A very satisfactory volume of trade is reported in sporting goods within the past week. Quotations are: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per

cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand. Standard shot, \$6.50 per hundred lbs; chilled, \$7 per 100 lbs; buck and seal, \$7.50 per 100 lbs; ball, \$8 per 100 lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—The active season for this is now over. The demand is merely nominal.

Cordage—The strong state of the raw material market for cordage still continues, and as stated before, while there is very little activity at present, there is every likelihood of a material advance in price before Spring.

Cement and Firebrick—This market is unusually dull and will probably continue so until the revival of navigation. We quote: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—There is little activity. Our quotations are as follows: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3; one inch, \$2.95.

METALS.

A slight easing off has been experienced in the metal market, but notwithstanding, prices in all cases have been maintained and some lines are a little firmer. Copper is a striking feature of the market. The active demand, the firmer and upward tendency and the scarcity still exist. Pig iron is moving well and in sheets and Canada plates there is much activity. Prices remain unchanged, but a further advance in tin is expected.

Pig Iron—The market is active and prices continue firm. There is no further advance over the quotations of last week, when advances on four lines were reported. Quotations are:

"Disc," No. 1.....	\$16.50 delivered Montreal.
"Dom.," No. 1.....	17.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Glengarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.50 delivered Montreal.
" (special).....	18.50 " "
Ayresome No. 1.....	18.00 " "
" No. 3.....	17.50 " "
Summerlee.....	19.50 " "
Clarence No. 1.....	18.00 " "
" No. 3.....	17.50 " "
No. 1 Cleveland.....	18.00 " "

Bar Iron—There has been a large falling off in the demand. There is now no scarcity and prices remain as before. We quote: Merchants' bar, \$1.77 1-2; horseshoe iron, \$2.02 1-2; forged iron, \$2.02 1-2, net cash thirty days.

Tool Steel—The market is quiet. We quote: Black Diamond 8c to 9c; Sander-son's, 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb;

Conqueror, 7 1-2c; Conqueror High Speed steel, 60c.

Merchant Steel—A firm market prevails with a fair demand. We quote: Sleighshoe, \$1.82 1-2; tire, \$1.92 1-2; spring, \$2.75; toealk, \$2.42 1-2; machinery (iron finish), \$2.02 1-2; square harrow, \$1.87 1-2; reeled machinery steel, \$2.75; mild, \$1.82 1-2; rivet, \$1.82 1-2; net cash thirty days.

Cold Rolled Shafting—Factories still continue to call for considerable quantity of cold rolled shafting. Our quotations are as follows: Cold rolled shafting, 3-4 in. to 17-16, \$3.85 per 100 lbs; inch and a half to 3 inch, \$3.50 per 100 lbs.

Canada Plates—These are expected to advance shortly. There is a large quantity moving. Our quotations are as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—There is a good demand for these and the market remains firm. Quotations are as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—Many orders for galvanized iron have been booked for Spring delivery at advanced prices. The higher prices quoted lately are being maintained throughout. Our quotations are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge, \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Antimony—The advanced price quoted a week ago still holds. A fair amount of stock is moving. The price is 9 1-4 to 9 1-2c.

Sheet Zinc—Last week's advance quotations are being maintained and the market continues strong. We quote: Case lots, \$6.75 to \$7; small quantities, \$7 upward.

Tin Plates—The former price for tin plates is still being quoted, but an early advance is expected. There is considerable activity. We quote as before: Cokes, \$3.75; charcoal \$4.

Ingot Tin—No further advance this week. An active market prevails. We quote 32 to 33c, with no shading whatever.

Ingot Copper—Copper still continues to be a feature of the market. There is no likelihood of the scarcity being relieved and prices are firmer. We quote 16c to 16 1-4c, the former price being for quantities only.

Ingot Zinc—Advances have been noted on ingot zinc for some time past, and although no further advance is quoted

this week the market remains firm with a moderate activity. Quotations are 6 1-2 to 6 3-4c, the former being firmly held, and for quantities only.

Pig Lead—Pig lead is somewhat easier this week, and the market hardly as firm. We quote: \$3.50 to \$3.75, no concessions being obtainable on the former price.

Boiler Tubes—Considerable activity exists in this line. Our quotations are as follows: Highest grade soft steel British and American tubes, one and a half inch, 7 1-2c; 2 in., 8 1-2c; 2 1-2 in., 10c; 3 in., 12 1-4c; 3 1-2 in., 16c; 4 in., 20c; 5 in., 45c. Price per foot net.

Scrap Metal and Old Material—There is little change in this market from a week ago. It is much more satisfactory than it has been for several months, and prospects for the future are even brighter. Quotations are as follows: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 2 1-4c; zinc, 2 3-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 5 1-2c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front Street East.
Toronto, Dec. 9, 1904.

Hardware.

THROUGHOUT Ontario the retail hardware trade is very brisk. The Christmas trade is now in full swing, and there is a good demand for seasonable lines. The good sleighing throughout the northern part of the province has made Christmas trade very lively. Jobbers still report a good demand for all lines and for Christmas and Winter lines especially. A good many of the retailers, however, have completed their Christmas stock, and, talking of taking stock in January, are keeping a low stock of all other lines. There are quite a few express orders coming in from this class to fill up depleted stocks.

The only change in quotations to be noted this week is in galvanized and copper ware. The discount on galvanized pails and tubs is now 47 1-2 per cent. The discount on copper pits and copper ware in general, including teapots, etc., has been changed to 47 1-2 per cent.

Lawn Mowers—A few orders have already been booked, and the trade is generally interested.

Guns and Ammunition—There is a very fair demand for ammunition and also for cartridges of small size.

Washing Machines—The general trade keeps up.

Chain—The normal demand continues. We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Barb Wire—The changed prices of last week remain firm.

Galvanized Wire—A fair business is being done at unchanged prices.

Coiled Spring Wire—Inquiries regarding the market are being received. We quote as follows: No. 9, \$2.70 per 100 lbs. freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; earlots, \$2.65; freight allowance to 20c.

Wire Nails—Nothing new is to be noted on this market. An apparently fair quotation is about \$2.25 per keg f.o.b. Toronto, with ear lots at \$2.20.

Cut Nails—A very good trade is being done, with prices unchanged. We quote: \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—There is a very good trade being done in this line, there being a noticeable run on Winter shoes. Our quotations are as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—There is a good demand with unaltered prices.

Screws—A good business is being done, with prices firm.

Rivets and Burrs—The volume of trade is good. Prices remain unchanged.

Bolts and Nuts—There is a good trade with firm prices.

Woodenware—There is no change in this market. The normal business is being done. We quote: Tubs, No. 0, \$11.25; No. 1, \$9; No. 2, \$8; No. 3, \$7; pails, No. 1, 2 hoops, \$1.85; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 70c; 6 dozen packages (12 to case), 87c.

Cordage—Business is being well looked after, and orders for binder twine, for next season's trade, are coming in. Prices are unchanged. Partial quotations are: Double shingle yarn, 10 1-2c; single shingle yarn, 10c; sashcord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

METALS.

The metal market exhibits no change in situation this week. There is still a strong market. The United States market is not quite so active just now as it has been during the past three months, and probably the local market will be affected to some extent. However, buy-

ing on the local market still continues very freely. Orders for pig iron for delivery the first three months of the year are being placed.

The advanced prices on the local market continue firm. Stocks of Canada plates still continue light. The brass market continues active.

Pig Iron—Buying on the local market continues freely. Orders booked are for delivery during the first three months of the year. Quotations are as follows:

Middlesboro, f.o.b., Toronto.....	\$18 90
Hamilton, No. 1 ".....	18 00
" No. 2 ".....	17 50
" No. 1, Hamilton.....	17 00 to 17 30
Midland, No. 1 ".....	18 00
" No. 2 ".....	17 00 to 17 50
" No. 1 f.o.b. Midland.....	16 25 to 16 75
Radnor, f.o.b. furnaces.....	27 50
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—Prices remain unchanged. and the active movement continues. Quotations are as follows: \$1.80 f.o.b. Toronto, with discount of 2 per cent.; for extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tin—The advance in the market last week is maintained. Quotations are from 32 to 34c per pound.

Galvanized Sheets—A good demand is maintained. Prices are firm.

Tin Plates—An excellent trade is being done. Prices are steady.

Canada Plates—Stocks of Canada plates are still light, and prices remain firm at last week's advance. There is a very good trade being done. We quote: All dull, \$2.40; half-polished, \$2.50; and all-bright, \$3.75.

Copper—Advanced prices are firmly maintained, but sales are somewhat light. Our quotations are: Ingot copper, \$14.75 to \$15 per 100 lbs; sheet copper, \$20 per 100 lbs.

Brass—The market is active and firmer than last week, discounts now being 10 per cent. instead of 15 per cent.

Lead—Prices are being maintained at the advance of last week, and sales are very good. Our quotations are: Pig lead, \$3.60 per 100 lbs; and bar lead \$3.60 per 100 lbs.

Zinc Spelter—There is a very good trade being done, with quotations firm at from 6 to 6 1-4c per lb for foreign and 5 1-2 to 5 3-4c per lb. for domestic.

Building Paper—Owing to the quietness in the building trade local orders have been gradually declining, while the demand from the country has also diminished. Prices continue unchanged.

Firebrick—A good demand continues. Prices are firm, especially with Scotch firebrick, which, according to the present outlook, will be a very scarce article before navigation opens next Spring. We quote the following: English and Scotch firebrick 30 to 35c; American, low grade, 25 to 30c; high grade 32 1-2 to 40c.

Cement—The demand is quieter, and very little business is expected to be

transacted before the beginning of building operations next Spring. Many contractors anticipate an advance and are trying to secure their next season's supply at present prices. The majority of manufacturers are refusing these orders and are holding out with the hope of receiving a higher figure after the first of the year. Prices as yet are unchanged. Our quotations are: For earlot orders f.o.b. Toronto, Canadian Portland, \$1.70; American Portland, \$1.70. For small orders ex warehouse: Canadian Portland, \$1.90 to \$2; American Portland, \$1.90 to \$2.

Old Material—The exceedingly strong demand for pig iron, copper, lead and zinc has caused the manufacturers to rely more on the scrap material. Owing to this, prices, although no material change has taken place this week, are very firm and an advance is expected. The strong demand for "old rubbers" which has been a feature in former years, is strangely absent this year. As a result trade is quiet. We quote the following: Heavy copper and wire, 11 1-2 to 12c per lb; light copper, 10 1-2c to 11c per lb; heavy red brass, 10c per lb; heavy yellow brass, 7 3-4 to 8c per lb; light brass, 5 1-2 to 6c per lb; tea lead, \$2.35 per 100 lbs; heavy lead, \$2.50 to \$2.60 per 100 lbs; scrap zinc, 3 3-4c per lb; iron, No. 1 wrought, \$9; No. 2 wrought, \$2; machinery cast scrap, \$12.50 to \$13; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 5 1-4c per lb; country mixed rags, 65c per 100 lbs.

Coal—The demand continues steady. Slack is scarce and prices are firm. Our quotations are: Anthracite in cars at Briges: Grate, \$5.50 per gross ton; egg, stove and nut, \$5.75 per gross ton; pea, \$3.75 per gross ton.

Standard Hocking, soft coal, in cars, f.o.b. at mines: Lump, \$1.60; 3-4 inch, \$1.50; run of mine, \$1.40; nut, \$1; N. P. and S., 75c; coarse slack, 50c; box cars 10 cents per ton additional.

Loughioghenny soft coal in cars, bonded, at the bridges: 1 1-4 inch, \$2.60; 3-4 inch, \$2.50; mine run, \$2.40; slack, \$1.90.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special Correspondence of THE CANADIAN GROCER.

Vancouver, B.C., Dec. 2, 1904.

GENERAL business through the month of November just passed port of Vancouver during the shows a large increase over that of November a year ago. In 1903 the duty collected was \$95,086, while in 1904 it amounted to \$112,552, showing an increase of \$17,466. These figures indicate more than anything else the growth of trade in this city. The exports also show a commendable increase, last year's figures being \$487,551, while for the month of November this year they were \$655,076.

A new industry in the shape of a plant for the manufacture of bedsteads is to

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and LIVERPOOL, ENGLAND.

be commenced shortly in Vancouver. It will represent an expenditure of nearly \$50,000 at first, and about 25 hands will be employed, the idea being to build up a trade all over the western country. The company now being organized will work under what is known as the Taylor patent, the promoters being Alfred Taylor, (patentee) R. J. McDonald and W. G. Stevenson, of Victoria, while G. F. Cane is carrying out the local arrangements. By the use of the patent it is estimated that bedsteads can be manufactured at from 80c to \$1, which is said to be much cheaper than by any other system. No rails are required between the posts, and the patent is very simple, requiring only a casting. A model has been on view in the city and has elicited many favorable comments.

• • •

C. E. Harvey, representing Andrew Weir & Co., of Glasgow, Scotland, has been in the city for several days in connection with the service to Mexico, the contract for which was awarded to his firm. The subsidy of \$50,000 per annum for five years is to be given each by the Dominion and Mexican Governments, with a monthly service. Mr. Harvey will leave within the week for Mexico to look over the ground personally, and will return via Vancouver. He has had absolutely nothing to say regarding the project, and will not even acknowledge he is the representative of the company, although he presents credentials to that effect. It is announced, however, by the local agent, Mr. J. H. Greer, that steamers will be on the route in two months, they being at present on the coast, and if these are not suitable new boats adapted to the service will be constructed.

• • •

Lumbermen are again active in making preparations for interviewing the Dominion Government in relation to the imposing of a duty on lumber from the United States. It is about time something was done, as small mills are going under every week, and despite the picking up of trade, mills are running only part time. One of the latest effects is brought from the interior by W. A. Galliher, the M. P. elect for Kootenay, who arrived yesterday. In addition to general results of depression, the Arrowhead Lumber Co., one of the large companies operating near Revelstoke, and of which W. R. Beatty is manager, has shut down its saw mill for the winter, and will operate only its planing mill. Both interior and coast lumbermen will unite in sending a delegation east, and next week a meeting will be held in this city of their representatives and the newly elected solid seven of Liberal members.

• • •

Mining prospects are promising. Reports from the interior are that the industry is in a healthy condition, better than for some time past, and on the coast is steadily progressing. One of the principal up-coast properties is that on Princess Royal Island, operated by a syndicate of New Brunswick people. The values are good, running to \$100 per ton, and 23 men will be employed all winter. F. M. Tweedie, son of the premier of New Brunswick, is manager,

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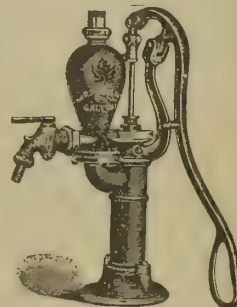
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and is in the city this week. The property is located 6½ miles from tide water, and the transportation that distance adds considerably to the cost of production.

There are a number of good mining propositions in the north, particularly in the Skeena River country, but with which nothing can be done because of the lack of transportation facilities.

In connection with mining, it might be mentioned that last week asbestos float was picked up in the Slocan camp. Hitherto this has been an unknown mineral there, and so far it has not been proven that it exists in any large quantities. There is plenty of float lying around, of schist formation, with short fibre.

• • •

A slight decline in the price of bar iron and steel is the only change in local quotations this week.

Chester H. Rollston, of Hodgson & Stearman's hardware, Vancouver, has obtained a patent on his improved sheave and rope guide. This device has been specially designed to prevent the rope from getting out of the sheave groove.

The roller bearing invented by Mr. John Kincaid, of this city, has been tested by the B. C. Electric Railway Co., in its car shops at New Westminster, and has proven extremely successful in every feature. The self-oiling, dustless and frictionless ideas worked out far better than it was thought they would.

An improved saw tooth, remarkable in results both in efficiency of the tooth and excellence of the work, has been patented by John H. McLean, saw filer, of the Canada Shingle Co., of this city. It is good for either ripping or cross-cutting. Large saw manufacturers in the United States have made extended trials, and are in every way satisfied.

Extensive supplies, including 30,000 feet of lumber, have gone north to the Alsek district, where W. L. Breeze, who has New York capital interested, is to develop hydraulic claims on Bullion creek, a consolidation of interests having been effected. One hundred and twenty-five men will be kept at work.

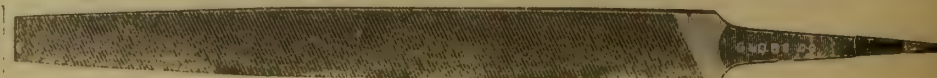
The Government is considering the lowering of the level of Okanagan Lake, for the benefit of the Town of Kelowna, which is flooded every Spring by high water. The plan is to dredge the outlet, which will allow a greater flow into Dog Lake, and may render the river more navigable.

The Vernon City Council is discussing the putting in of a water power plant in connection with the electric light system.

J. W. Haskins, mining engineer, left yesterday for Chicago to interest capital in the construction of a railway in the northern part of the province, to give transportation facilities to mining properties in the Dease Lake district. He represents a company which has good claims on Rosella Creek, a tributary of the Liard, and in which H. H. Jones, formerly of Port Hope, is interested.

John Cain, Port Angeles, a railway promoter, has been examining the iron showings on the west coast of Vancouver Island, with a view to erecting an iron smelter. He thinks that the

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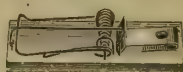


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iron and coal in such close proximity on Vancouver Island affords an excellent opportunity for the investment of capital.

NOVA SCOTIA MARKETS.

Halifax, Dec. 6, 1904.

CONSIDERABLE activity now prevails in shipping departments, as retailers at shore ports are now anxious to make all necessary additions to their Winter and early Spring stocks before the closing of navigation, which cannot much longer be delayed. A good trade is also being done in sporting goods. Quite a quantity of supplies has also been required by lobster packers and fishermen. Trade on the whole has kept up very steadily to date, and the trade generally expresses satisfaction with the prevailing conditions.

* * *

Linseed oil and turpentine are easier. A number of metals are firmer, but otherwise the local market remains unchanged. There has been some trouble at south shore points over rope supplied to the fishermen. A quantity was imported from Boston through St. John, N. B., and admitted free of duty under the belief that it being intended for fishermen's use it came under the special exemption clause. It is contended that this clause refers only to what are known as "head ropes," used for connecting nets, seines and traps, and which calls for an entirely different class of rope from the importations in question. The matter has been referred to the Government, and the impression which prevails here is that the full duty will still have to be paid, which will make it a losing speculation, as the cordage has been sold rather under the current Nova Scotian prices.

* * *

W. S. Fallis, who has been the representative of the Sherwin-Williams Paint Co., in Great Britain, has returned to New Glasgow, and will spend the Winter there. Mr. Thomas Turner, the managing director of the Caledonia Iron Works, Kilmarnock, Scotland, has been in the city for a few days on business. His firm manufacture machinery, and his visit is for the purpose of looking over the field here. He also visited the works of the Dominion Iron & Steel Co.

* * *

S. J. Shea, of Hamilton, representative of the Wrought Iron Works, Toronto, who had his leg broken by an accident on the Nova Scotia Central Railway early in October, has entered action against the company for \$15,000. The train left the rails and Mr. Shea jumped out with the above result. He was taken to the Victoria General Hospital, where it was found necessary to amputate the limb. Mr. Shea left for his home last week, having first retained counsel to prosecute his suit.

PITTSBURG METAL MARKET.

From the Iron Trade Review, Dec. 8, 1904

Pig Iron—Sales in this market were almost entirely limited to small lots in the past week, although the buying of Bessemer iron for future delivery has been considerable. This iron is being

largely purchased by speculators who are placing it in an independent storage warrant yard established at Aliquippa, Pa. Most of this iron, amounting to about 5,000 tons has been purchased on the basis of \$15.50, furnace, for delivery during the first quarter. Owing to the refusal of all the Valley furnace interests except one to carry stock in warrant yards at the furnaces the establishment of the yard at Aliquippa became a necessity. The iron for this yard is purchased from the furnaces on the basis of sight draft against bill of lading and the prices secured are considered excellent. A meeting of the Bessemer Pig Iron Association was held in Cleveland on Saturday, December 3. Practically all of the iron of association furnaces through the first quarter has been sold and they are asking higher prices for what remains. For first quarter delivery the market is strong at \$15.50 to \$15.75 and for the second quarter \$16 is asked. Forge iron for early delivery is scarce and is now quoted at \$15.85, Pittsburgh. The Carnegie Steel Co. blew in Clarion furnace No. 3 last week and two of the Mingo Junction stacks this week. We revise quotations as follows:

Bessemer, Valley	\$15 50 to	\$15 75
Bessemer, Pittsburgh.....	16 35 to	16 60
No. 1 Foundry.....	17 25 to	17 50
No. 2 Foundry	16 85 to	17 00
Gray forge, Pittsburgh.....	15 85 to	16 00
Chilled basic, Valley	15 25 to	15 50
Chilled basic, Pittsburgh....	16 10 to	16 35

Steel—A meeting of the billet association has been called to be held in New York on December 20. It will consider a proposal to advance prices \$1 or \$2 a ton. None of the steel producers will take business on the present basis for delivery beyond the first of the year. We make the following quotations: Bessemer and open-hearth billets, 4x4 inches, and slabs, up to and including 0.25 carbon, \$21 f.o.b. mill, Pittsburgh; with actual freight to points of delivery; 0.26 and including 0.60 carbon, \$1 advance, 0.61 to 1.00 carbon \$2 advance. Billets smaller than 4x4 inches, \$2 advance; sheet and tin bars, \$23; cut bars, \$23.50; forging billets, \$23. Bessemer and open-hearth steel rods are held at \$27 to \$28.

Rails and Track Material—An announcement of 1905 rail prices is expected within the coming week. Quotations on light rails have been advanced \$1 a ton during the week and still further advances are expected.

Plates—Steel car specifications are heavy but outside of this line of work there is little doing.

Bars—Specifications that are being received by the mills are not in proportion with the recent heavy buying; but this is no doubt due to the season and consumers are permitting their stocks to run down for the annual inventory. No further advances have been made in iron bars.

Sheets—A slight advance in galvanized sheets has been made by the leading interest on account of the recent advances in the spelter market. The in-



**OUR SHEET STEEL
PRESSED BRICK**

Is an ideal covering, either for new buildings or improving old ones.

IT IS VERY EASILY AND QUICKLY APPLIED,
GIVES PERFECT WEATHER PROOF PROTECTION,
IS FIRE, LIGHTNING AND RUST PROOF
AND COSTS VERY LITTLE.

Consider its fine appearance—its splendid enduring qualities—and slight expense—and decide to serve your own best interests by using it.

Fullest details of information in our catalog.

METALLIC ROOFING CO., LIMITED,
Wholesale Manufacturers,
TORONTO, CANADA.

dependent mills are not selling on the present basis for delivery next year on account of the probability of an advance in sheet bars.

Pipes and Tubes—Demand continues heavy despite the off season. The expected advance did not materialize, although it is expected that an advance will be made the first of the year.

Wire and Wire Nails—While jobbers looked for an advance last week none was made and it is probable that nothing will now be done until the first of the year. Demand continues fair in nearly all lines and all the mills are operating at their full capacity. We make the following quotations: Wire nails, jobbers' carload lots, \$1.70; retailers' carloads, \$1.75, and less than carloads, \$1.85; painted barb wire, \$1.85 to jobbers in carloads; retailers' carloads, \$1.90, and less than carloads, \$2, with 30 cents for galvanizing. Annealed smooth fence wire is held at \$1.55, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburgh, 60 days, with 2 per cent. discount for cash in ten days. Iron and cut nails are held at \$1.75 and steel \$1.70.

Merchant Steel—A meeting of the shafting association will be held in New York on December 15, but it is doubtful if any price changes will be made.

LONDON METAL MARKETS.

From Metal Market Report, Dec. 7, 1904.

Tin—Spot tin opened weak at £135 5s, futures at £131 17s 6d, and after sales of 240 tons of spot and 150 tons of futures closed weak at £133 for spot and £131 12s 6d for futures, making price as compared with yesterday 20s lower on spot and £1 2s 6d lower on futures.

Copper—Spot copper opened irregu-

bar at £65 12s 6d, futures at £66, and after sales of 500 tons of spot and 800 tons of futures closed firm at £66 for spot and £66 7s 6d for futures, making price as compared with yesterday unchanged on spot and unchanged on futures.

Lead—The market closed at £12 17s 6d, making price as compared with yesterday unchanged.

Spelter—The market closed at £25, making price as compared with yesterday unchanged.

HARDWARE CONDITIONS IN MANITOBA.

(Market quotations corrected by telegraph up till 12 a.m. Friday, Dec. 9, 1904.)

Office of HARDWARE AND METAL,
Room 515 McIntyre Block,
Winnipeg, Man.

GENERAL jobbing business in hardware and metals is of seasonable proportions. There is no great activity at present, but that is only to be expected, as this is the quiet season of the year. With the practical close of lake navigation, wholesale houses have now accumulated large stocks for winter distribution; although large quantities have not yet been forwarded from the Lake Superior ports. Dealers complain that lack of sufficient snow for good sleighing in the country districts is retarding business.

Carefully revised quotations will be found below which will repay close perusal. The most important change in the local market this week is the sharp advance in window glass, which has been made in sympathy with the increasing strength of primary markets.

Business in paints and oils is fairly active, and prices continue firm and without any changes of consequence. We quote:

Barbed wire, 100 lb.	\$2 85
Plain galvanized	3 39
	9 2 50 2 90
Plain galvanized	10 3 50
"	12 3 10
"	13 3 20
"	14 3 90
"	15 4 45
"	16 4 60
Plain twist	2 85
Staples	3 35
Oiled annealed wire	10 2 86
"	11 2 92
"	12 3 00
"	13 3 10
"	14 3 20
"	15 3 25
Annealed wires (unoiied) 10c. less.	
Horseshoes, iron, No. 0 to No. 1	\$4 55
No. 2 and larger	4 30
Snow shoes, No. 0 to No. 1	4 80
No. 2 and larger	4 55
Steel, No. 0 to No. 1	4 70
No. 2 and larger	4 45
Horsenails, No. 4—1½ in., list price	0 48
" 5—2 "	0 32
" 6—2½ "	0 28
" 7—2½ "	0 24
" 8—2½ "	0 22
" 9—2½ "	0 20
" 10—2½ "	0 20
" 11—2½ "	0 20
" 12—2½ "	0 20
" 14—2½ "	0 20

Discount on these prices 40, 10, 7½ per cent., plus 15c. per box.

Cut Nails—		Wire Nails—	
2d 1 in.	\$1 00	1 in.	4 00
3d 1 in.	4 00	1½ in.	4 00
3d 1½ in.	3 65	1½ "	3 65
4d 1½ in.	3 40	1½ "	3 40
5d 1½ in.	3 40	1½ "	3 40
6d 2 in.	3 30	2 "	3 30
8d 2½ in.	3 15	2½ "	3 15
10d 3 in.	3 10	3 "	3 10
20d 4 in.	3 05	3½ "	3 05
30d 4½ in.	3 00	4 "	3 05
40d 5 in.	3 00	4½ "	3 00
50d 5½ in.	3 00	5 "	3 00
60d 6 in.	3 00	5½ "	3 00
		6 "	3 00
Bar iron (basis)	2 50		
Swedish iron (basis)	4 75		
Sleigh shoe steel	2 65		
Spring steel	3 00		
Machinery steel	3 50		
Tool steel, Black Diamond, 100 lb.	9 50		
Jessop	13 00		
Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50		
18 to 22 gauge	3 75		
24 gauge	3 90		
26 gauge	4 00		
gauge	4 10		
Galvanized Iron, Apollo, 16 gauge	4 00		
18 and 20 gauge	4 00		
22 and 24 gauge	4 25		
26 gauge English or 28 American	4 50		
28 gauge	4 50		
30 gauge or 10½ oz.	4 75		
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.			
Queen's Head, 24 gauge	4 25		
26 gauge	4 50		
28 "	4 75		
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.			
Genuine Russian, per lb.	11		
Imitation "	07		
Tinned, 24 gauge, 100 lb	8 00		
26 gauge	8 05		
Finplate, 1C charcoal, 20 x 28, box	9 50		
IX	11 50		
IXX	13 50		
I got tin	35		
Canada plate, 18 x 21, 18 x 24 and 20 x 28	3 00		
Canada plate, full polished	3 75		
Sheet zinc, cask lots, 100 lb	8 25		
Broken lots	8 00 8 75		
Pig lead, 100 lb.	4 50		
Black iron pipe, ½ inch	2 22		
" ¾ "	2 49		
" 1 "	2 78		
Black iron pipe, ¾ inch	3 58		
" 1 "	5 19		
" 1½ "	7 20		
" 2 "	8 55		
" 2½ "	12 30		
Rope, sisal, 7-16 and larger, basis	10 75		
Manila, 7-16 and larger, basis	15 25		
Lath yarn	11 25		
Solder	20		
Axes, chopping	\$ 6 75 to 12 00		
" double bits	12 00 to 18 00		
Bluestone	5 25		
Screws, flat head, iron, bright	85 and 10 p.c.		
Round "	80 p.c.		
Flat " brass	75 and 10 p.c.		
Round "	70 and 10 p.c.		
Coach	70 p.c.		
Bolts, carriage, ¾ or smaller	60 and 5 p.c.		
" 7-16 and up	55 p.c.		
Bolts, machine, ¾ and under	55 and 5 p.c.		
" 7-16 and over	55 p.c.		
Bolts, tire	65 p.c.		
Bolt ends	55 p.c.		
Sleigh shoe bolts	65 and 10 p.c.		
Machine screws	70 p.c.		
Plough bolts	55 p.c.		
Square nuts, case lots	3c. discount.		
" small lots	2½ c.		
Hex " case lots	3c.		
" smaller lots	2½ c.		
Rivets, iron	50 and 10 p.c.		
Copper, No. 8	32		
No. 12	37½ p.c.		
Coil chain, 3-16 inch	9½		
" ¼ inch	7½		
" 5-16 inch	5.20		
" ¾ inch	4.60		
" 7-16 inch	4.45		
" ¾ inch	4.30		
" ¾ inch	4.10		
" ¾ inch	4.30		

Spades and shovels	40 and 5 p.c.
Harvest tools	60 p.c.
Axe handles, turned, s.g. hickory, doz.	83 15
No. 1	1 90
No. 2	1 60
Octagon extra	2 30
No. 1	1 60
Files common	70 and 10 p.c.
Diamond	60 p.c.
Building paper:	
Anchor, plain	65c.
" tarred	70c.
Pure fibre, plain	67½ c
" tarred	80c.
Ammunition, cartridges, Dominion R.F.	52½ p.c.
Dominion, C.F., pistol	30 p.c.
" military	15 p.c.
Ammunition, cartridges, American R.F.	30 p.c.
C.F. pistol	5 p.c.
C.F. military	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black	15 00
chilled, 12 gauge	16 00
soft, 10 gauge	18 00
chilled, 10 gauge	19 00
Shot, Ordinary, per 100 lb	6 00
Chilled	6 50
Powder, F.F., keg	4 75
F.F.G.	5 00
Tinware, pressed, retinned	70 and 10 p.c.
" plain	75 and 2½ p.c.
" pieced	30 p.c.
Japanned ware	37½ p.c.
Enamelled ware, white	45 p.c.
" Famous	50 p.c.
" Imperial	50 and 10 p.c.
Green Wire Cloth	1 55

PETROLEUM.

Water white American	27½ c.
Prime white American	25½ c.
Water white Canadian	25½ c.
Prime white Canadian	24½ c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2	7
Wrought iron scrap	5
Copper (heavy)	8½ c. per lb.
Yellow brass (heavy)	7½ c.
Light brass	5c. to 6c.
Lead pipe, or tea lead	2c. to 2½ c.
Zinc scrap	1c.

PAINTS, OILS AND GLASS.

White lead	\$5 00 to \$5 50
Putty in bladder, 2½ lb. in 100 lbs. keg	0 2½
Turpentine, pure in barrels	\$ 0 87
Less than barrel lots	0 92
Linseed oil, raw	0 55
Boiled	0 58
Lubricating oils, heavy castor machine	0 26½
" extra engine	0 27
" dynamo	0 38
" back	0 22
" cylinder	\$0 50 to 0 80
(as to quality)	
Harness oil	0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00½
" 2nd pressure	1 09½

WINDOW GLASS.

16-oz. O.G., single, in 50-ft. boxes—	
16 to 25 united inches	\$2 25
26 to 40 "	2 50
16-oz. O.G., single, in 100-ft. cases—	
16 to 25 united inches	4 00
26 to 40 "	4 25
41 to 50 "	4 75
51 to 60 "	5 25
61 to 70 "	5 75
21-oz. C.S., double, in 100-ft. cases—	
26 to 40 united inches	6 30
41 to 50 "	7 35
51 to 60 "	8 40
61 to 70 "	9 45
71 to 80 "	10 50
81 to 85 "	11 55
86 to 90 "	12 60
91 to 95 "	14 70
96 to 100 "	17

Edmond Germain, joiner contractor, Montreal, has assigned; meeting of creditors on November 19.

DUMPING CLAUSE REVISED.

THAT the work of those who have been fighting the anti-dumping regulations tooth and nail ever since their adoption has not been without avail is seen in the official announcement of a revision in the regulations according to which the amount of any advance in the market value of goods between time of their purchase abroad by the importer in Canada and the date of their exportation to Canada shall not be subject to the special duty after November 9, 1904, provided such goods have been exported in the usual course of trade and the actual date of purchase has been established to the satisfaction of the collector of customs by contracts or other sufficient proofs produced for his inspection. It is provided, however, in respect to goods subject to an ad valorem duty that the ordinary duty shall be collected as heretofore on the fair market value of the goods at the time of their exportation to Canada.

A GOOD LINE.

There is perhaps no line in the Dominion more profitable to the dealer than that of bathroom specialties and fixtures. The James Morrison Brass Mfg. Co., Limited, of Toronto, Ontario, have made a specialty of useful appliances for the bathroom and have succeeded remarkably well in producing a big profit maker for the dealer. The articles are unusually attractive in appearance and because of their double value (beauty and utility), are about the most rapid sellers on the market.

RECORD OF PATENTS.

Below will be found a complete up-to-date record of patents recently granted to Canadian inventors, in Canada and United States, which is furnished by Featherstonhaugh & Co., patent barristers, solicitors, etc., Toronto, Montreal, Ottawa and Washington, D.C., from whom all information may be readily obtained:

Canadian patents—J. W. Campbell, cheese boxes; W. Cadwell, hoof expanders; P. Sylvester, threshing machines; B. E. Bechtel, brick block or tile cutter; F. X. Boehler, files; F. A. Wilson, packing cases, boxes, crates and other contrivances in which articles or merchandise are packed and shipped.

United States patents—Alfred T. Ahley and F. J. Esmond, fluorescent indicators; Wm. F. Brodrick, means of securing valves to cans without the use of solder; Robt. Christie and T. B. Hamilton, pneumatic straw stacker for threshing machines; Wm. A. Firstbrook, crosscut table-saw; Linus O. Thayer, firearm; Geo. A. Wenz and I. J. McKee, Jr., circular folding machine.

GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, Montreal.

Brand Galvanized Sheets

Ask your supply house for this brand. Price and quality right. Guaranteed by the makers.

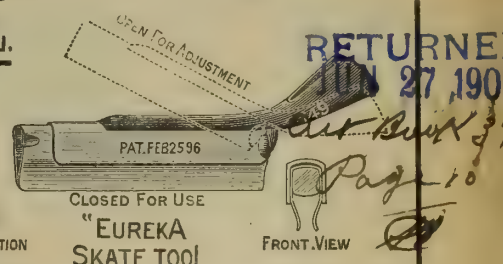
Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.

ASK FOR EUREKA SKATE TOOL.

Only good Skate Sharpener on the market.

SKATING SEASON.

Buy me a EUREKA, love:
Will kiss thee as your turtle dove;
To you I'll turn kind and always be thine—
O, promise me a 149.



FILE SECTION

CLOSED FOR USE

"EUREKA
SKATE TOOL

FRONT VIEW

Send for 149 section of the "Green Book of Hardware" for valuable information.

UTICA DROP FORGE & TOOL CO.

SMITH & HEMENWAY CO.

Mfrs. of Nippers and Pliers.

Mfrs. of Cutlery and Hardware Specialties.

294 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL. ALLEN C. JENKING, Canadian Manager

STANLEY RULE & LEVEL CO.,

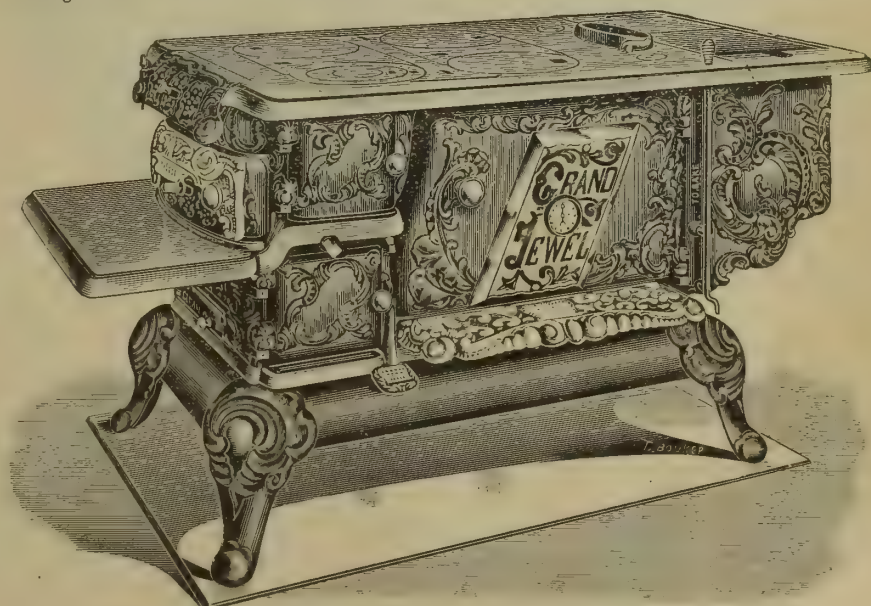
NEW BRITAIN, CONN., U.S.A.

IMPROVED CARPENTERS'
TOOLS

SOLD BY ALL HARDWARE
DEALERS.

The Grand Jewel Coal Cook Stove

is a new stove of the very highest class, specially adapted for burning Hard or Soft Coal; can also be used for burning Wood



Two Sizes—Square

Duplex Grate of improved pattern. No space left between grate and fire-box linings, so that no ashes or cinders can pass between or accumulate, so as to interfere with its easy working. One movement of the crank cuts out the dead ashes and cinders and drops them into ash pan.

The Duplex Grate when reversed forms a perfect WOOD fire bottom, and with all the coal linings in position 17 inch wood can be used. Special Wood Linings can be supplied to admit wood 24 inches long

Two Sizes—with Tank

The Oven is our standard one piece Sheet Steel Oven, same as our Grand Jewel Wood Cook, which has been so wonderfully popular and successful. This Oven will never warp nor crack. With a Steel Oven much less fuel is expended in getting up a baking heat, and less required to keep the stove running.

The Oven is well ventilated.

Oven Door Thermometer.

Water Front for either size supplied when ordered

Manitoba
Depot

MERRICK, ANDERSON & CO.,

Winnipeg

THE LAY OF THE ENGLISH TRAVELER*

A rattling blade
For pushing trade,
They always say I am.
Admired by all,
Both great and small,
They call me sprightly Sam.
At each hotel
They know we well—
The "Rose," "Crown," "Bull" or
"Lion."
And well aware,
They'd best take care
No little dodge to try on.

Chorus. For Waitress, Boots,
Whichever suits
My wants, I ring the bell.
Run, Jane or John
And wait upon
That big Commercial Swell!

In railway trains
I take some pains
To get the corner seat,
Secure and snug
With railroad rug,
To warm my knees and feet.
Of trunks I've got
A precious lot,
So railway porters, fly,
Don't mind the load,
For when they're stowed
I'll fee you on the sly.—Chorus.

With trap and horse
I drive across
The country fresh and green.
A horse to trot
I'm sure I've got,
The fastest ever seen.
The yokels stare,
But I don't care,
Let rural chaff be blowed;
My pace is fast,
I'm quickly past
Whoever's on the road.—Chorus.

A merry man
He always can
Find welcome everywhere.
So business done,
With jest and fun,
I laugh away life's care.
I'm up to slang,
Can sing "Slap Bang,"
Play billiards, cards or dice.
At table act
With skill and tact,
As president or vice.—Chorus.

If by a fluke
I'd been a Duke,
Or some grand titled swell;
I ne'er had met
The jovial set
That now I love so well.
If not great wealth,
I've strength and health,
And friends, I'm proud to say;
And what is more,
I've cash in store
To meet a rainy day!—Chorus.

PLUMBING EXHIBIT.

The Provincial Board of Health is providing space at the Parliament buildings, Toronto, for an exhibition of ancient and modern plumbing work and fixtures. The idea is to demonstrate in

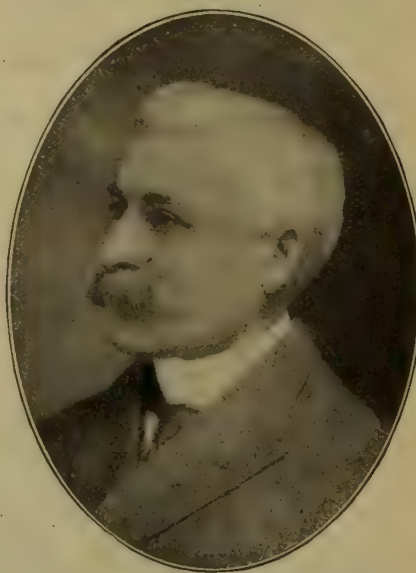
* When Mr. W. H. Evans, of the Canada Paint Co., was in England he was invited to dine with some English commercial men. This is one of the songs given lustily by a Knight of the Road upon that occasion.

a practical way the great advance which has been made in the manufacture and installation of these fixtures. M. J. Quinn, mechanical superintendent of the Public Works Department, is making the collection. The date has not yet been set, but is expected to be in the near future.

THEIR NEW PRESIDENT.

NO two men travel exactly the same road to reach the goal of their ambitions in the business world. Some men start at the bottom with a large concern and by steadiness and shrewd judgment win their way to the positions of honor and responsibility. Others, after getting a grasp of business principles, launch out for themselves and by enterprise, energy and sound sense build for themselves reputation as well as a profitable business.

The career of C. A. Whitwam, the recently elected president of the Canadian Wholesale Hardware Association, has been rather after the manner of the latter class. In 1874 he started in the hardware business with the late John E. Smith, St. Thomas, Ont. After he



C. A. Whitwam.

had secured an excellent training here, in partnership with his father, a retail business was opened under the style of Charles Whitwam & Son, St. Thomas, which was continued for 18 months, when the business was advantageously sold and Mr. Whitwam entered the employ of the wholesale firm of Wood & Leggat, Hamilton, leaving them to represent Risley & Kerrigan, Toronto.

Once more he returned to the retail trade, opening in Hamilton under the style of Black & Whitwam, which business, after being successfully conducted for some time, was succeeded by the Hamilton Hardware Co.

From here Mr. Whitwam went to the Hobbs Hardware Co., London, Ont., whom he represented on the road for two years and a half. His experience was now so varied and wide and his knowledge of trade conditions so extensive that he was next brought to the warehouse to act as buyer, which position he still retains, though he is now vice-president of the company and has

under his care much of the heavy responsibility entailed in such extensive business operations as those of the Hobbs Hardware Co.

In addition to this company's own operations it has large interests in several manufacturing plants, making the company one of the most influential in Canada.

Personally Mr. Whitwam is the type of man who makes friends quickly. Genial, broad-minded and courteous, he is ever ready for a pleasant word with any acquaintance, business or friendly. He is a keen business man, however, so his kindness of temperament is never imposed upon. He is yet a young man, and his friends expect more honors to come his way before the accounts are closed. Canada is a growing country, and in the making the useful men must have wide recognition.

COPPER SHIPMENTS TO BREAK PAST RECORDS.

THE excitement in the copper trade which for a few days had been allayed has again broken out violently," says the New York Journal of Commerce. "Domestic consumers who heretofore have been unaccountably diffident have, at last, come into the market and breaking their usual custom have contracted liberally for both Lake and electrolytic copper for shipment during the first quarter of 1905, as well as for December. The Calumet and Hecla Company is credited with accepting contracts for 10,000,000 pounds of Lake copper from domestic consumers, while producers of electrolytic copper have taken contracts for fully as much. The result has been an advance of 1-2c to 3-4c per pound during the week and the tendency is still upward. At the close Lake copper is difficult to buy at 15c and some holders are demanding 15 1-4c; indeed, the price of the Calumet and Hecla Company is 15 3-8c. Electrolytic copper is saleable at 14 3-4c, and some producers are demanding 14 7-8c to 15c, especially for contracts extending far into the future.

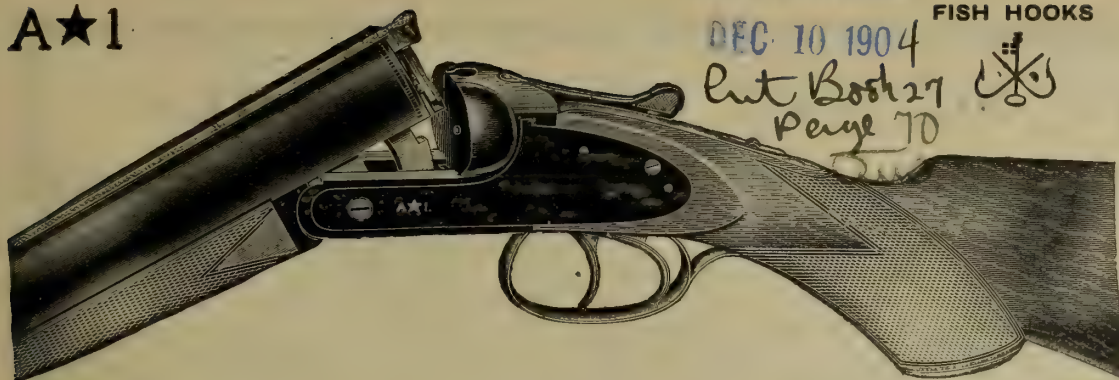
"Not only have domestic consumers broken their reserve, but representatives of the Chinese interests have been placing heavy contracts in the local market for shipment as far forward as next November, at high premiums.

"The exports of copper during the week ending last Friday, were 6,788 tons, shipments on Friday being almost as great as during the preceding five days of the week—3,229 tons. This brings the total shipments for the first eighteen days of the month to 12,315 tons, indicating that the shipments for the full month will be in the neighborhood of 20,000 tons.

"The outgo in December, it can be definitely stated, will be very heavy, but the January movement will probably be the greatest in the history of the trade. It will be recalled that the exports during January, 1904 (29,000 tons), exceeded all previous monthly exports, but unless there is some unforeseen development the exports during January, 1905, will be even greater, probably 30,000 tons."

HARDWARE AND METAL
RETURNED

A★1



Breech Loading
Hammer and
Hammerless
GUNS
Muzzle Loading
GUNS
and
RIFLES

F. W. Lamplough & Co., - - Montreal

TO VISIT CANADA.

IN this week's issue appears an announcement from Mr. Walter P.

Noteutt, of London, England, regarding an early visit to be made to Canadian manufacturing concerns. Mr. Noteutt established himself in 1884 as a manufacturers' representative, and has given special attention to hardware, tools, woodenware, builders' hardware, etc., of Canadian and American manufacture. He says that during the past year or so he has been impressed with the larger opportunities for selling goods of Canadian manufacture in Great Britain, and in order to interview manufacturing exporters, he is arranging to visit Canada early in the coming year. A representative of Hardware and Metal has been able to note personally Mr. Noteutt's facilities for warehousing and selling and can recommend his proposition to the attention of those advertisers who are in a position to supply the British market. Mr. Noteutt must, of course, confine himself to a limited number of agencies, as it is only in this way that he can give satisfactory service. Prior to his arrival any inquiries addressed to him in care of Hardware and Metal will be gladly received and forwarded to him.

COMPANIES TO VOTE IN MUNICIPAL ELECTIONS.

AT a meeting of the executive of the Canadian Manufacturers' Association in Toronto on Nov. 24, one of the subjects discussed was "Securing franchise rights in municipal elections to incorporated companies."

Mr. R. J. Yonge, secretary of the Manufacturers' Association, in the course of an interview with The Can-



HOOKS, Cup and Square Hooks, in Bright Iron, Brassed Iron, and Solid Brass.

SCREW RINGS and GENERAL BRASS FOUNDRY.
JONES & BARCLAY
BATH ROW, BIRMINGHAM, ENG.

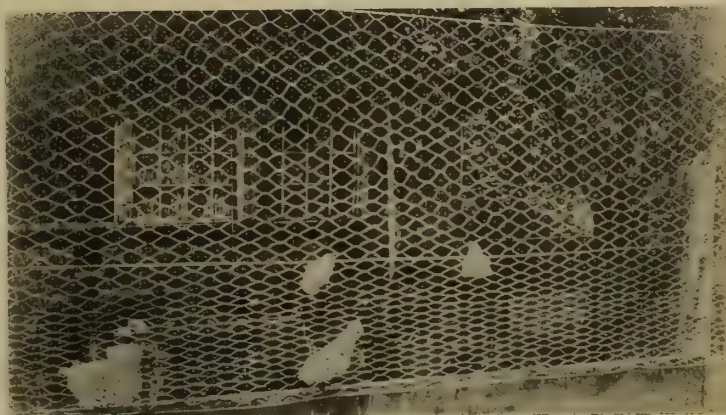
Page "Acme" Poultry Netting

This is the only netting that can be erected without puckers, bags or wrinkles in it. The selvedge wires being of straight smooth wire, the web can be adjusted smoothly and evenly along the edge and centre wires.

Notice that this netting has a large wire running through the centre (except in the 24-inch) which adds much strength to the web and enables it to hold its shape.

With Acme netting no boards at the top are necessary, and posts can be placed long distances apart.

The netting is very close at the bottom, the meshes being only $1\frac{1}{2}$ inch; at the top they are 3 inch. This makes it as effective as netting of $1\frac{1}{2}$ -inch mesh throughout, and the cost is much less.



THE PAGE WIRE FENCE CO., Limited

WALKERVILLE

MONTREAL

ST. JOHN

adian Grocer stated that this matter had been down on the official slate for some time. It is claimed that while members of incorporated companies carrying on a manufacturing business have votes where they reside, they have no voice whatever in municipal legislation affecting the districts in which their factories are situated. When it is considered how large the manufacturing interests loom up in the aggregate property assessment of many Canadian towns and cities the reason for a change

by way of re-distribution in the municipal franchise is easily seen.

When asked whether the idea was to allow an incorporated company as such one vote or more, Mr. Yonge said the details were not yet arranged. He would go so far, however, as to say he thought one vote should be given such a company. In case the managing director of a firm located at Montreal, say, was given a vote in the municipal elections, he would have an additional vote in his home municipality in the event of its being other than Montreal.

PAINT, OIL AND BRUSH TRADES

A Vital Point for Purchasers of Linseed Oil.

USERS of linseed oil in the varnish, linoleum, paint, and allied trades, are constantly finding that they get varying results, according to the batches of oil used. The varnish maker complains that the oil "breaks" under heat, gives a non-elastic product, or one that "blooms;" the painter finds his paint crack, does not dry hard, etc., and the linoleum manufacturer finds he gets a cement that does not set well, and gives with the cork an inferior product; if used for tarpaulins, the dried oil may soon become soft and absorbent; and for these variations in behavior hardly any two users give the same explanation, though all agree the oil is at fault.

Various suggestions, such as adulteration with fish, pine, or hydrocarbon oils, too much "fat" present, newness of seed or admixture; plate seed oil, to cheapen the cost of East Indian or Baltic seed oil, are freely made as reasons why linseed oil nowadays is distinctly inferior to what it used to be in days gone by. The chemist has at his disposal an array of delicate tests to demonstrate the purity of the oil, such as the low flash point, its distinctive taste and smell as proving the presence of lighter oils, the mixed acid test, as given in these columns, to show admixture of La Plata oil, gravity tests, iodine number, weight of oxygen absorbed in a given time, etc. An oil may successfully pass these tests, and be certified as pure and of good quality, and yet be totally unfitted for the purchaser's use, and may exhibit all the faults previously mentioned. After an experience extending over a long period, and the treatment and testing of a large number of samples, the writer is of opinion that nearly all the difficulties experienced by users of genuine linseed oil, lie not so much in the admixture of the seed of various growths, but in want of maturity of the oil itself. The main point, however, is that it lies in the power of every user, by a certain and simple test that can be applied in five minutes, to distinguish with certainty an oil that is unfitted for his purpose if good results are desired.

If anyone will take a test tube, say, $\frac{3}{4}$ inch diameter, half full of freshly-made linseed oil, and apply heat until the dense fumes given off flash or burn, he will find, notwithstanding the oil may have been carefully filtered, and be perfectly bright, that large flocks of gelatinous-like matter are formed, sometimes amounting to 20 per cent. or 25 per cent. by bulk of the oil treated; this is technically known as breaking, or "spawning." If the contents of the tube are allowed to cool, and are poured on glass, a very irregular surface results, showing that the oil is not ma-

tured, since if an oil of similar quality be retained in tank it gradually loses its tendency to spawn or form flocks, until, after two or three years' storage, it remains clear and bright, even if heated until the fumes burn quietly and can then be used with safety and satisfaction for any class of work. The albuminous or flocculent matter appears by age to have become absorbed by the oil; it will not separate by heat, and tends to give increased toughness and backbone in use. Many users are aware of this, and go to the expense of tanking their oil for a long period before using, and they find that their products are correspondingly increased in quality and uniformity.—Oil and Colourman's Journal.

Citronella Oil.

Users of this staple perfume, which is employed to a very large extent in

cheap soap-making have been much perturbed by the gross and varying adulteration practiced on this oil, according to the Oil and Colourman's Journal. The last two years have rather turned the tables on the adulterator, since the London market has had every parcel analyzed, and heavy differences have had to be paid. Hence a critical time has arisen in the Ceylon trade, at which the Government are much perturbed. They fear, although quite without reason, that the fine Java oil may supplant the Ceylon oil unless distillers take care to leave the oil alone. The director of the Royal Bontanic Gardens now suggests that every parcel shall be analyzed by the Government analyst, and that drums containing pure oil should be sealed with a red seal, and those adulterated to the extent of not more than 10 per cent. with a great seal.



Page 4
nothing.

You can buy paint for less money than you can buy Hollywood Paint, but when your customers count the labor of putting it on, it would be dear paint in comparison to Hollywood if they got it for nothing.

Hollywood wears on the job, not off it.

In Paste, Ready Mixed and Floor.

The Imperial Varnish & Color Co.
LIMITED,
TORONTO, ONTARIO, CANADA.

WITHOUT A COMPETITOR IN MERIT
OR RIVAL IN POPULARITY

CAN BE TRULY SAID OF

BOECKH'S BAMBOO-HANDLED CURLING BROOMS



They are made of specially selected corn—well fastened, neat and light.

Do you supply your local rink?

If not no doubt you do not stock this now seasonable line.

Order now, as "The Roarin' Game" will soon be in full swing

United Factories, Limited,

Head Office: TORONTO.

BRANCHES:
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Paints

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LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.

Hard work never hurts anyone, and why not work when every effort brings good results?

So far as we are concerned, we find genuine pleasure in stretching every muscle to serve our Linseed Oil Customers as they never have been served by any other firm in the past.

OUR PURE LINSEED OIL

is a winner from the word go. Perfect in body, durability and firmness. Get it and see results.

The Dominion Linseed Oil Co.
Limited

HEAD OFFICE : 34 YONGE ST., TORONTO.

FACTORIES: BADEN, FLORA, GUELPH, OWEN SOUND, ONT.
and 31 Mill Street, MONTREAL, QUE.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Dec. 9, 1904.

A COUPLE of changes in prices are about the only unusual feature of the paint and oil markets. Turpentine is weaker and a further decrease of one cent a gallon is noted. Linseed oil is firmer, and an advance of one cent a gallon is given. White lead and putty are still in strong demand, while other lines continue unchanged.

Turpentine—Single barrels, 78c per gallon; 2 to 4 barrels, 77c per gallon. For smaller quantities than barrels 5c extra per gallon is charged. Standard gallon is 8.6 lbs. The above prices are net thirty days, for longer terms prices are higher.

Linseed Oil—Raw, 1 to 4 barrels, 44c; 5 to 9 barrels, 43c; boiled, 1 to 4 barrels, 47c; 5 to 9 barrels 46c; delivered in Ontario between Montreal and Oshawa at 2c per gallon in advance.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1, 6c; No. 2, 5c.

Putty—Bulk, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in whole-sale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, Dec. 9, 1904

AS far as can be learned there is an absence of large consignments of shellac gum arriving from Calcutta. The market is firm and although the selling price has not changed indications point strongly to an advance. Inquiry for paints during the present season has ceased and

trade is expected by the wholesale dealers to continue quiet till the beginning of February when orders for Spring work will begin to arrive.

During the last few weeks the price of turpentine has been gradually declining, until with the slump of 2 cents as recorded last week the minimum price has been reached. Trade this week has a better appearance and prices have advanced 5 cents at the manufacturing point, which is due to a general increase in orders caused by a diminishing stock in trade. Local dealers are well stocked and although no change in prices is reported this week an advance is anticipated at no distant date.

The glass market is firm. Prices as quoted in the following markets are net, but dealers sending in large and well assorted orders could get 10 per cent. discount. The strike situation in Belgium continues unchanged. The majority of plants have been closed up since the first part of September, and the present outlook points to no change in present conditions. Eight plants are in operation, but these cannot fill all orders which have been accepted.

The lead market is unsteady and the majority of dealers decline to discuss the future conditions. An advance of 10c has taken place this week and as far as can be learned another advance is anticipated.

White Lead—Ex-Toronto, pure white lead, \$4.75; No. 1, \$4.30; No. 2 \$4; No. 3, \$3.60; No. 4, \$3.35 in packages of 25 lbs and upwards; 1-2c per lb extra will be charged for 12 1-2 lb packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560

lbs, \$4.25; ditto, in kegs of 100 lbs, \$4.50; No. 1, in casks of 500 lbs, \$3.75 to \$4; ditto in kegs of 100 lbs, \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs; Gilbers' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.75 to \$3; white, \$2.85 to \$3.10 per barrel; No. 1 (orange), \$2.25.

Linseed Oil—Our quotation is: Raw, 1 to 4 barrels, 44c; boiled, 47c; 5 to 9 barrels, raw, 43c; boiled, 46c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 75c; 2 to 4 bbls 74c, Toronto; 5 bbls and over f.o.b. point of shipment, net 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Ordinary, bladders in barrels, \$1.65; pure linseed oil, \$2 to \$2.10; bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2c per lb and 8 1-2 for single tins.

Glass—See current quotations at the end of this issue.

In the Active Mood—Present Tense

is the situation about our new factory and office—made more active by the liberality, business foresight and good will of dealers in placing orders this Fall (for present and future shipment, with Spring dating) for Church's Cold Water

ALABASTINE

thereby insuring goods in stock when season opens in Spring, and enabling us to get ready that splendid supply of advertising matter we always furnish.

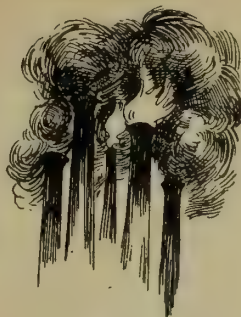
Many have not ordered. "Do it now." And, incidentally, any dealer handling LAND PLASTER, for the farmers; PARISTONE, a hard wall plaster that makes a wall as hard as adamant by simply adding sand and water; PLASTER of PARIS—"Shield Brand";—Church's BUG FINISH—wanted by everybody who raises potatoes;—all of which we manufacture—address for prices, terms, etc.,

The Alabastine Co., Limited, Paris, Ont.

Superfine Colors in Oil

This statement should interest you
—if good goods are your hobby.

The natural pigments used in our colors in oil are the purest, strongest, finest obtainable; the chemical colors are all of the best manufacture, and are guaranteed chemically pure.



OUR CHIMNEYS
SMOKE FOR YOU

You See How it is

We're after the trade that sticks.

We waste our time when we sell
a customer goods that make him
sick of us forever.

STANDARD PAINT & VARNISH CO., Limited, WINDSOR, ONTARIO

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

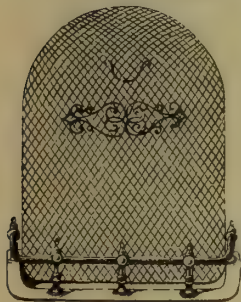
H. E. St. George, London, Ont.

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WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal,
Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



Wire Spark Guards

Polished Brass and
Enamelled

Catalogue on request

DENNIS WIRE & IRON CO.,
LONDON, ONT.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES
MONTREAL.

Get your GLUES from
The GROVE CHEMICAL CO., Limited
Appley Bridge, Lanc, England.

Our ordinary grades are better than ordinary, and we can supply special makes
for special purposes. SCOTCH GLUES, BOX GLUES, COLOGNE GLUES
for Paper Makers. Size of all kinds. Send your name for our printed matter.

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works
or from the principal Color Dealers in Canada



"ISLAND CITY" GOLD PAINT

should be given a fair trial.

We have every confidence in the
result.

It is just the thing for holiday
trade.

P. D. DODS & CO., Montreal  Toronto  Vancouver

COLORS

Many makers assert that they manufacture all the ingredients which go into the make-up of Liquid Paint.

This is not correct. They may be *Cooks*, sometimes clever *Cooks*, compounding and serving up that which they buy, but the only positive and direct maker of Paints and Colors, from the first process, in Canada, is **THE CANADA PAINT COMPANY.**

THE CANADA PAINT COMPANY dig down into Mother Earth and produce by correct manipulation a beautiful range of soft and useful Venetian Reds, Ochres, Oxides, Browns, rich Indian Reds and Blue-Black Graphite. In Showy Chromes, Cool Greens and Smart Vermilions, the very essential crystals are taken, and rare, strong, durable colors are wrung from them by the chemists and color makers of this Canadian Company.

**THE
CANADA
PAINT
COMPANY
LTD**

MONTREAL

TORONTO

Window Glass.

MONTREAL.

It is expected that very little glass will be received by Canadian firms before the opening of Spring navigation. Stocks are being depleted, but as yet no advance has been made, which, however, is assured in the near future. We quote. First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet, \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent. discount 30 days.

PETROLEUM.

Refined—Prices continue unchanged. The demand is good and trade is brisk. Our quotations are as follows: Refined Canadian water white, 17 1-2c; Canadian prime white, 16c; American water white, 18c, ex warehouse.

Crude—Market is steady and prices continue unchanged. Quotations are as follows: Pennsylvania, \$1.60; Corning, \$1.37; Newcastle, \$1.47; North Lima, \$1.07; Tiona, \$1.75; South Lima, \$1.02; Whitehouse, \$1.01; Somerset, \$1.01; Indiana, \$1.02; Canadian, \$1.53.

THREE NEW LINES.

The Grand River Metal Works, Galt, are putting on the market three new lines, which they term "trade getters." The Cummings Steel Harness Bracket has three good points—it is cheap, neat and strong. It will stand a downward strain of 400 lbs., only weighs a few ounces, is nicely japanned, and can be retailed at 25c per pair.

The Cummings Steel Stable Scraper. This, they claim, is the first steel scraper in the world to retail at 25c. The inventor of this scraper was formerly a farmer, and made it to suit himself. They are made of cold rolled steel, strong elm handle, steel braces riveted to blade and handle; the blade is nicely japanned; weight complete, about 3 1/2 lbs.

The Galt Barn Door Latch is made of steel similar to malleable latch and the blacksmith latch, which have such a large sale, but the Grand River Metal

Works of Galt claim to be able to demonstrate to any inquirer that it is an improvement on both.

Full information as to price, etc., will be given to any inquirer. Kindly mention Hardware and Metal.

Business Changes

McLENNAN & York, lumber manufacturers, New Liskeard, have dissolved partnership; J. J. & D. A. McLennan continue.

Fraser, Hamilton & Co., planing mill, Ottawa, have dissolved partnership.

W. A. Ogden, harness merchant, Strathroy, has sold to A. L. Jacques.

A. W. Nelson, of Jas. Nelson & Bro., hardware and wall paper merchants, Windsor, is dead.

A. Mitchell & D. McRae, mill owners, Powassan, have dissolved partnership; A. Mitchell continues.

G. Weeton Mfg. Co., manufacturers of silverplated ware, Toronto, have suffered loss to plant by fire.

QUEBEC.

T. Benard and J. E. Z. Benard have registered under the style of T. Benard & Fils., building contractors, Montreal. H. Ouellet, brass worker, Montreal, is dead.

The assets of C. Scanlan, plumber, Montreal, have been sold.

John Galipeau & Co., plumbers, Montreal, have dissolved partnership.

R. H. Gale has registered with the Slade Electric Co., contractors, Quebec.

Rosseau & Beaudry, electricians, Thetford Mines, have dissolved partnership.

Aime Chabot and J. E. Chabot have registered under the style of A. Chabot & Frere, contractors, Beaumont.

Geo. Lapointe & Co., contractors, Montreal, called for a meeting of creditors, which was held on Dec. 6.

MANITOBA AND N.W.T.

T. Whitely, carriagemaker, Miami, has been burned out.

E. F. McSherry, hardware merchant, Weyburn, has been burned out.

W. J. Doyle, hardware merchant, Clan William, has suffered loss to premises by fire.

F. Y. Newton, agricultural implement dealer, Roblin, has suffered loss to premises by fire.

The estate of J. A. Parke, implement dealer, Churchbridge, has been sold to H. W. Schrader.

BRITISH COLUMBIA.

McMillan & Pound, planing mill owners, have suffered loss to plant by fire.

The sheriff will hold a sale of the property and plant of the Skeena Lumber Co., Port Essington, on December 12.

NEW BRUNSWICK.

Geo. Upham, mill owner, Nackawick Siding, has been burned out.

MACHINERY

MACHINERY MARKETS.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Dec. 9, 1904.

BUOYED up, as it were, by the activity in iron and steel, and by the bright outlook that prevails in these, the machinery market is seeing rather good times and business reported this week is of fairly large amount. While this is notably one of the slackest seasons for machinery manufacturers there is a notable industrial movement. Besides the glowing prospects in iron and steel there is another factor tending to assist in the activity in the machinery market and that is the feeling that the coming Spring is to see a very large number of new industries started and large additions to others already established. The dumping clause has caused more than one United States firm to commence manufacturing here and from well founded rumors many others are about to follow.

Electrical machinery continues to lead while there is an active demand for both wood and iron-working machinery and not a few small sized boilers. Inquiries are numerous and the perfect condition of the country roads for sleighing makes rural deliveries more easy and no doubt adds its quota to the brightness in the machinery market.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Dec. 9, 1904.

LOCAL dealers report a very busy week on the machinery market. No very large contracts for machinery have been placed, but there have been many good orders booked. Business done includes orders for all kinds of machinery. Engines and boilers are receiving special attention, and planing mill outfits and also all lines of wood-working machinery are selling well. For machine tools and machinery of like kind there is a very fair demand, but no very large orders are being placed.

On the whole the machinery dealers are sanguine for a continuation of the past week's business.

Machinery and Electrical Notes.

The city of St. John, N.B., took over the Carleton Electric Light Works on December 1st.

On December 20th Calgary ratepayers vote on a by-law to raise \$60,000 to install a municipal electric light plant.

E. Beaudry, of Montreal, has purchased the electric light plant at St. Johns, Que., at a price in the neighborhood of \$300,000.

The entire electric power and light of both Vancouver and New Westminster is supplied by a new station situated at Lake Beautiful.

The directors of the British Columbia Copper Co., Victoria, have authorized the preparation of plans for two additional 400-ton smelting furnaces.

The erection of the new plant of the Ross Engine Works, St. Catharines, is completed and the work of buying and placing the new machinery has begun.

A new electric radial railway is to be built between Brantford and Hamilton. The promoters are Majors Parsons and Leslie, Toronto, and Hon. Mr. Haines, New York.

The Mexican Light and Power Co., which is controlled by Toronto and Montreal capitalists, will derive special advantages by the action of the Mexican Government in fixing the value of the Mexican dollar at 50 cents.

An amalgamation has taken place between the Winnipeg Street Railway Co. and the Winnipeg General Power Co. The name of the amalgamated company is the Winnipeg Electric Railway Co., with a capital stock of \$4,000,000.

There is a project on foot to build an electric railroad from Presque Isle to Washburn and Perham, N.B. The motive power will be secured by harnessing the Aroostook Falls of the Aroostook River, a tributary of the St. John River.

The Harbor Commissioners of Montreal have recently come to a decision regarding the use of the elevator during the Winter season. It is proposed to use it for storage purposes and arrangements are now being made to have consignments of grain brought in by rail, and carried right into the elevator. Part of some consignments already received are for the Canadian Malting Co. and the remainder will be held for shipment till next season.

Big Power Scheme.

Several prominent capitalists of Montreal are about to develop extensive electrical power at Kakabeka Falls, which are situated not far from Fort William. Heretofore this valuable water-power has been held by Chicago owners, and the deal is a very important one, giving over to Canadian interests this valuable power. Those mentioned in connection with the purchase are: Herbert S. Holt, president of the Montreal Light, Heat and Power Co.; Chas. R. Hosmer, presi-

dent, and F. W. Thompson, vice-president and general manager of the Ogilvie Flour Mills Co. Arrangements have been made for the construction of a plant in the capacity of thirty thousand horse-power for immediate use, to be extended to fifty thousand horse-power later. There is every reason to believe that with this great development the twin cities of Port Arthur and Fort William will become great industrial centres, as the construction of the Grand Trunk Pacific is expected to run near Port Arthur, and the C.P.R. is now being double tracked to Winnipeg. The company just formed have every prospect of a successful termination of their enterprise.

Dangers of Producer Gas.

WHEN testing producer gas great precaution should be taken to prevent accidents, due to its poisonous character, and a note of warning is uttered to those who find it necessary to work with this gas. The risk arises from the presence of water gas, power gas, producer gas, blast furnace gas, of a large percentage of carbonic acid. This is one of the constituents of ordinary coal gas, but in that the proportion is low, varying from 4 per cent. to 12 per cent. In water gas it may be 30 per cent. and in carburetted water gas, as high at 50 per cent. In other cases it ranges from 10 to 25 per cent. Carbonic acid is an active poison and one of the greatest dangers arises from the fact that it is inodorous and its physiological action is very insidious and cumulative. The victim usually becomes overpowered with drowsiness, and by the time he realizes the danger is unable to escape. The deadly character of carbonic oxide poisoning is shown by records covering five years in England, out of fifty-one cases of poisoning, seventeen being fatal. These accidents were traced to several causes, among them being leakage from pipe joints, gradual escape of gas within a confined atmosphere in a small engine room, cleaning of tank or flues before the gas has escaped, flues placed underground, the inodorous nature of the gas, and the workman's ignorance of the danger, and the earliest symptoms produced by

it. There is also some danger of carbonic oxide poisoning in the use of gas irons and gas stoves in imperfectly ventilated rooms. The most prominent symptoms of this poisoning are giddiness, palpitation, weakness of the limbs and headache. The best remedy for poisoning of this kind is fresh air, artificial respiration, administration of oxygen and the application of warmth. The preventing measures to be adopted when there is any risk of this poisoning, should be thorough ventilation of the room where gas is liable to accumulate, allowing only competent persons to have access to and inspect piping and valves, and the provisions of suitable medical appliances, such as the oxygen cylinder and its fittings for instant application if necessary.

Directions for Setting up and Operating a Turret Lathe.

THE machine should be bolted to the floor before the belt is put on. Do not adjust the position of the machine to the running of the belt. Set the machine true with the countershaft or main line by dropping down a plumb bob from each end of the shaft. Since plumb bobs are not in the kit of every machinist, an inch nut or any weight on the end of a string thrown over the shaft will answer.

The countershaft should line up perfectly with the shaft from which the power is received and it should be perfectly level. It should be well oiled before starting and examined after it has run fifteen minutes to see if any of the bearings are warm. Locate the stock supports and adjust them for height by placing a bar of stock in the machine and slowly revolving it. If the countershaft clutches slip, screw up the two small nuts at the rim of friction and slightly turn each the same amount.

The speed should be exactly as prescribed, if not the table of sizes of work for which the various speeds are intended will be of no value. Do not put your belts on too tight at first. It is much easier to lace the belt two or three times while it is stretching than it is to get a new bearing running smoothly after it has been roughened by the belts being too tight. All new bearings should be frequently oiled and run with care.

To start the machine on bar work begin on some very simple work. Suppose the diameter of the head is one and

thirteen-sixteenths and the body one and one-fourth inches, that the total length is six inches and that the piece must be finished all over. Get a bar of one and seven-eighth inch stock; see that it is fairly straight and free from short kinks and that there is no burr of any size on either end. If the bar has been cut off in the shear the burr should be hammered down. The large adjusting collar under the sleeve should be screwed back to open the chuck and forward to close it. Now remove the bushing from the spindle, for this is only used for smaller bars than one inch, and would not admit the one and seven-eighth inch bar. It is necessary to let back the rolls in the roller feed in order to remove this bushing. After this is done push the bar through the stock supports into the spindle and through the chuck until the end projects about three-quarters of an inch beyond the face of the chuck. Adjust the jaws at the back of the roller feed till they are about one-thirty-second of an inch loose on the stock. Adjust the chuck until it requires much force to thrust the chuck lever to the left. The rolls of the roller feed should be set down against the bar till each spring is raised a trifle.

OPERATING.

Now the next thing is to determine the speed to be run. This can be done by the use of a table, or by experience. Turn the turret around until the cross slide comes in working position, set the cut-off tool and trim off the rough end of the bar. Before turning to the next place, set the stop.

Next move the "back-stop" up close and clamp it. Run the turret back against it till it turns to the next position; next loosen the back stop again and push it back till the end of the swinging "stock-stop" measures a distance equal to the length of the work which is six inches plus the width of the cut-off tool; which we call 3-16. That is, the stock stop should be swung up into place and the turret should push the back-stop until the length between the end of the bar in the chuck and the end of the stock stop is equal to 6 and 3-16 inches; then clamp the back-stop firmly.

Now open the chuck and hold the lever to the right until the roller feed pushes the bar out against the stop, then forcibly close the chuck. Turn the turret to

turner. Now use the turner carefully and without the back rest, till the cutter is adjusted to size. This must be done on the first piece by use of calipers or any other gauge; take off about one-eighth inch chip each time while roughing, and allow it to run on about three-quarters of an inch.

After the end has been reduced one and a fourth adjust the back rest, have it follow the tool and bear on the one and a fourth size, then throw in the feed by the lever on front of the apron near the pilot wheel. Let this cut run up the required distance and adjust the feed stop for this tool. Before running back withdraw the tool by pulling the small cam lever towards you. Run back the turret until it brings the next tool into position and adjust this tool for turning the head of the piece; the head may be turned without the use of the back rest. Now the end of the piece may be shaped by the pointing tool held in one of the tool holders.

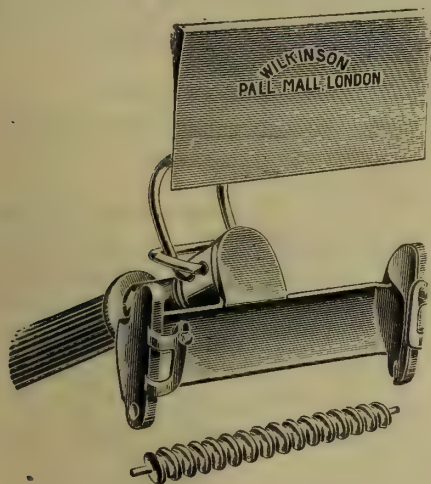
The screw cutting comes next. The next operation is rounding the head which may be done by an offset tool in the back tool post of cross slide, or it may be done by putting a crowning tool in place of the cut-off tool work from the back post of cross slide. By using the former instead of the latter an additional tool may be set in the back post for shaving the underside of the head. This, however, is not often necessary. Then cut the piece from the bar and proceed to run off the required number. If but one piece is desired it is not necessary to set any of the stops. These stops were set only for the benefit of more rapid production of the other pieces wanted. In starting the turner on a piece of this proportion do not throw in the feed until the edge of the back rest is started on the work. It should be fed thus far by hand. The fine feed should be used with a chip of this kind, but if the tool is beveled slightly, the medium feed can be used.

Saving of Oil by Filtration.

IN every engine room, and in every factory and mill, where a large amount of machinery and long lines of shafting are in operation, there is a great waste of lubricating oil, owing to the fact that in many cases no provision is made for catching the oil after it passes through the shaft or engine bearings. This is often due to the style of bearing used on the shaft line, but where suit-



Razors made by The King's Sword Cutlers.



WILKINSON'S PATENT ANTI-FRICTION ROLLER.

Patent Roller Safety Razors



LATEST,
NEATEST,
SAFEST,
LIGHTEST,
SIMPLEST,
CLEANEST.

Price, single Razor, in case, complete, 8/6. Leather case, with 6 spare blades, 35/-.

The Wilkinson Sword Co., Limited

27 Pall Mall, London, S.W.

SWORD CUTLERS AND RAZOR MAKERS.

SEND FOR LIST.

When a Bee Lights AND STAYS THERE—

it means that there is honey in the flower. When a power user tries Fairbanks Wood Split Pulleys and **continues** sending in his orders for them it demonstrates the satisfaction the pulleys are giving. The fact that the leading power users of Canada are using Fairbanks Wood Split Pulleys and express themselves as well satisfied with same should be proof enough for anyone that our pulley is built on correct mechanical principles and is not an experiment.

RETURNED
DEC 14 1904

To Owner
Fairbanks Wood Split Pulleys are manufactured to supply the demand for a better Wood Split Pulley than was heretofore obtainable. Study the cut and see how strong it is in appearance. It is even stronger than it looks. We will gladly send you circulars fully describing our pulleys on request.

Cut Book 27, - Page 81 -

THE FAIRBANKS COMPANY

MONTREAL

TORONTO

VANCOUVER

WINNIPEG

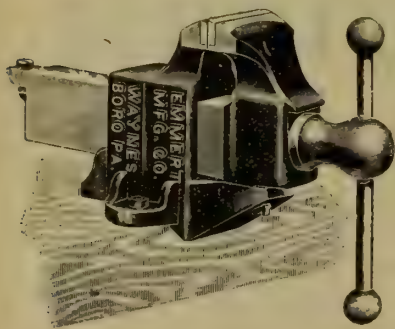
able self-oiling bearings are installed, and provision made for catching the drippings which accumulate in the drip cups, or where provision is made for catching the oil after passing through the engine bearings, and then provision made for purifying these drippings through an oil filter, a great saving is effected. The manager who has not been in the habit of saving in this direction, has lost a desirable point in workshop economy.

Every engineer appreciates the value of good oil, and asks his employer to provide the best in the market, for lubricating purposes, and for the purpose of preserving machinery in his care. When a good grade of oil is supplied there is all the greater reason for filtering it, and filtering devices on the market should receive consideration at the hands of factory superintendents.

The "Presto" Quick Acting Machinists' Vise.

THE accompanying cuts represent the "Presto" Quick Acting Machinists' Vise, manufactured by the Emmert Manufacturing Co., Waynesboro, Pa., for whom the Fairbanks Co., Montreal, are sole selling agents for Canada.

The "Presto" Quick Acting Vise marks the latest achievement in build-

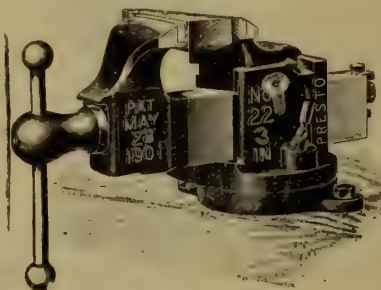


ing a thoroughly serviceable machinists' vise with the greatest range of adaptability and to meet the demands of all classes of iron workers. It is as strong as any vise on the market. It will do anything which any single vise can do, and more, it will do alone anything which all other vises together can do. The above assertions only place the "Presto" vise on a parity with all other good and efficient machinists' vises. But there are several features which mark the distinct superiority of the "Presto" vise, and set it apart in a

separate rank. Some of the strong features of the "Presto" vise are:

Its absolutely positive quick action and dependable rigidity. Its greater permissible take-up and powerful draw. Its wide range of adjustment to meet the requirements of the work to be done. Its superior construction and the absence of intricate or delicate parts.

The toothed pawl, which engages the toothed base rack, both steel, is accur-



ately seated in the solid nut block, and is forced into or out of engagement by the stationary pin, and held in either position without the adventitious aid of springs. There is not a single spring of any kind used in the construction of the "Presto" vise, hence one great and important advantage over any other quick acting vise ever placed before the public.

A quarter turn of the handle to the left, and the quick acting feature applies and the workman can instantly have the jaws of his vise set for a piece of work any size from the smallest up to the full capacity of the vise, and by another quarter turn of the handle to the right the work is securely held.

A good many of these vises have already been placed in some of the largest machine shops in Canada, and they are conceded to be among the most successful and quick acting machine and iron workers' vises ever placed on the market. Circulars describing this further may be had from the Fairbanks Co.

An Important Contract.

Construction on a huge barge canal is about to begin, connecting New York with the lakes, by which the United States people hope to compete successfully with Canadian canals. The cost is to be over a hundred million dollars, and proposals for its construction are already given out. Many requests for plans and specifications have been received from Canadian contractors, and there is good reason to believe that part at least of this work will be secured by Canadian firms.

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
" " 6 months.....	10 00
25 " " 1 year.....	10 00

MACHINERY WANTED.

Items under this heading inserted free for readers of HARDWARE AND METAL

SASH and door clamp to rent or buy. Gold Medal Furniture Co., Toronto.

Thread-cutting lathe—about eighteen inches by eight feet. Box 10, Brown's Corners.

WANTED—Portable saw mill—in good running order; give particulars and price. Box 793, Globe.

WANTED—Good second-hand boiler for saw mill; must be cheap. A. O. Miller, Avonmore.

WANTED—25 hoisting engines—single and double drum; with or without boiler; new or second-hand. Address H. W. Petrie, Toronto.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

BOILER FOR SALE—60 h.p., second-hand, return tubular boiler, good as new; bargain. Address Box 41, HARDWARE AND METAL.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, HARDWARE AND METAL, Montreal.

FOR SALE OR RENT—Water-power building, 40 x 80, two-storey and basement; also saw mill machinery, lately removed from another building; ready to run. McClellan, Reid & Shaneman, Gananoque, Ont.

GAS AND GASOLINE ENGINES—None better; write for prices and particulars. Tuerk Iron Works, Berlin.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.

STEEL CASTINGS—Equal to any foreign made ones, can be had from the Wm. Kennedy & Sons, Limited, Owen Sound.

TUBULAR BOILERS—A large number of first-class second-hand tubular boilers of all sizes for sale by the Polson Iron Works, Toronto.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

WORK AND
PRICES
RIGHT
GALVANIZING
ONT. WIND
ENGINE & PUMP CO.
TORONTO, ONT. LIMITED.

Buy the Best.



HERCULES

Sash Cord.

Star Brand Cotton Rope
Star Brand Cotton Clothes Lines
Star Brand Cotton Twine

For Sale by all Wholesale Dealers.

"MAPLE LEAF"

Stitched Cotton Duck Belting

MADE IN CANADA



MADE IN CANADA

"Maple Leaf" is made of the best cotton duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.

"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying.

Main Drive Belts a specialty.

Ask for "Maple Leaf" and take no other.

Beware of Imitations

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY

HAMILTON, ONTARIO, Limited

Use our "MAPLE LEAF" Belt Dressing.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER.

We have arranged to carry a large stock of Square and Hex Cap Screws, Square Set Screws, Bright Bolts, Washers, etc., in Canada, and can deliver from Canadian stock after February 1st., 1905. It will pay you, if you are a buyer of these goods, to get in touch with us.

Temporary Offices

25 Queen City Chambers, Church St., TORONTO.

Clauss Brand BARBERS' Shears

FULLY

WARRANTED.



Solid Steel and Steel Faced. Hand forged from Finest Steel.
These Shears are especially tempered for the purpose they are intended.

FULL NICKEL PLATE FINISH.

Write for Trade Discounts.

CLAUSS SHEAR CO., 169 Spadina Ave., Toronto, Ont.

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels

Superior in Design, Workmanship and Finish, and the most popular Gun on the Market.

Simplest
"Take Down"
Gun Made



HARRINGTON & RICHARDSON ARMS CO.
Also makers of H. & R. Revolvers.
Catalog on request. Worcester, Mass., U.S.A.

BABBIT

QUALITY & PRICE TO SUIT
ALL GRADES OF WORK

THE

CANADA METAL CO.

NO. 0
NO. 1
STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.

Cap Screws. Set Screws,
Machine Screws,
Cold Pressed Nuts,
Studs, Coupling Bolts,
SPECIAL MILLED WORK, Etc.

CANADA FOUNDRY CO., Limited

Head Office and Works; TORONTO, ONT.

DISTRICT OFFICES,

MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
CALGARY, VANCOUVER, ROSSLAND.



GRAND IDEA

"The Range that Never Fails."

GRAND IDEA RANGES look well and work well. They are **READY SELLERS**, and when sold give **PERFECT AND LASTING SATISFACTION**.

IF YOU WANT TO DO THE RANGE BUSINESS of your District, it will pay you to place a sample of the **GRAND IDEA** on your floor.

GRAND IDEA RANGES have Draw-Out Duplex Grates, Extra Deep Fire-Box, Vertical Oven Damper, Reliable Oven Thermometer, Convenient Basting Door, Reservoir that Will Heat, Oven that Will Bake Perfectly, Nickel that Stays Bright, and many other good points which make it a **General Favorite** wherever it is sold.

DO IT NOW. Order forward a Sample Range, and we are sure that you will agree with us when we say that the **GRAND IDEA** is the most perfect-working and altogether satisfactory range yet produced in Canada.

GUELPH FOUNDRY CO., LIMITED
GUELPH, Ont.

WESTERN REPRESENTATIVES—

MESSRS. E. G. LOW & CO., Market St., Winnipeg

EASTERN REPRESENTATIVE—

EUGENE PANNETON

1588 Notre Dame Street, - Montreal, Quebec



Every sale you make makes a friend or an enemy for your establishment. The purchaser is going to talk about you, and it depends entirely upon the article you sold whether that talk is to be in your favor or not. If you sell the

Imperial Oxford Range

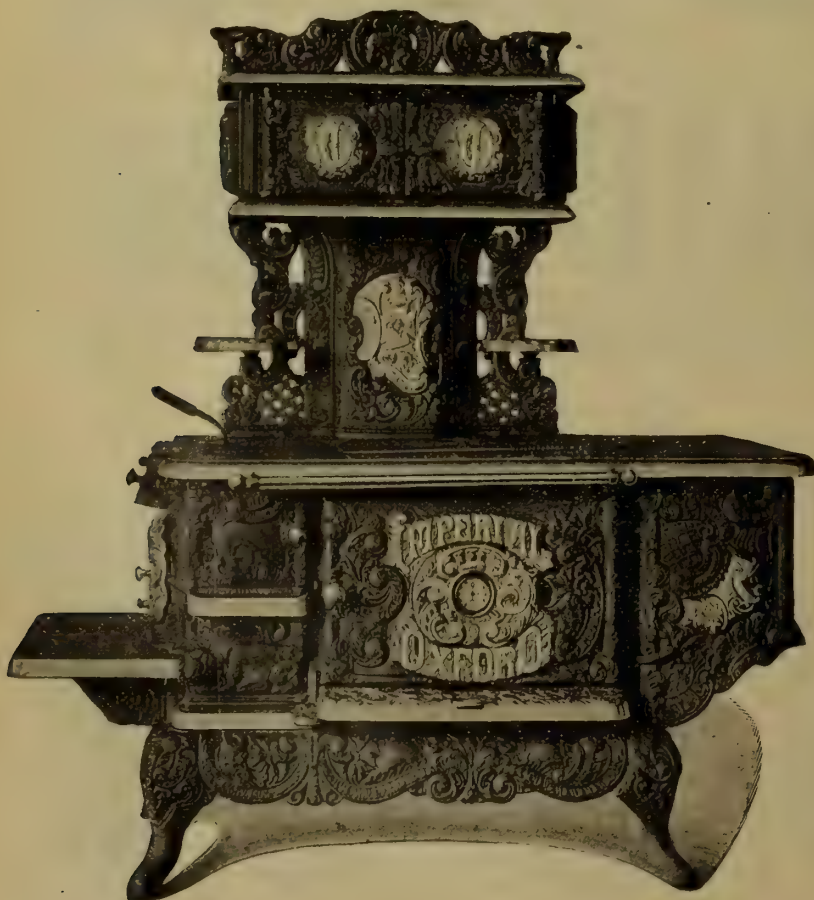
you are going to have nice things said about you, and every range you sell will mean a good advertisement for your store. Write us about the agency for the Imperial Oxford for your district.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.



STOVES AND TINWARE

Furnace Heating Standards.

THE oldest of the central heating systems in general use in this country for providing a comfortable temperature in all of the apartments of a building from one fire is the hot air furnace system. Owing to the fact that this system has been widely adopted for about three-quarters of a century less energy is being devoted by those engaged in this branch of trade to exploiting its advantages than is given to pushing some of the systems that have come into popularity during a comparatively recent period. Those who manufacture hot air furnaces confine themselves, in the majority of instances, to their production alone, and, in consequence, have comparatively little influence upon the manner in which furnaces are set and in the education of the men who engage in the setting of furnaces as a branch of their business. Consequently the interests of the hot air furnace are left to rest largely upon the abstract merit of that system of heating, while comparatively little attention is given to the matter of setting it in the best possible manner and to more scientific methods of arriving at the size of the apparatus and the relative proportions of the various pipes and parts.

There are not wanting those who are thoroughly alive to the fact that furnace work and the results which attend it can be scientifically determined as correctly in advance as after the work has been completed. Apparently the old plan of each man setting furnaces according to his personal experience is to be eventually superseded by a more reliable method of determining what is necessary. The old way insured success or failure in proportion to the intelligence of the man and the experience he possessed.

THE PRICE QUESTION.

The long establishment of the hot air furnace as a standard method of heating buildings has naturally made the price question one that is too frequently considered all important. In some cities, where houses are built in rows by the hundreds, a question not merely of dollars, but of cents, in the cost of heating a building will throw the contract one way or another, and it is hardly necessary to point out that much of this operation work shows neither intelligence nor intent to heat the building in a manner which a tenant has a right to expect when he occupies it. The fact that any mechanic working in sheet metal can readily secure a hot air furnace contract is the cause of much faulty work and also of much hardship to the owner through poor judgment and workmanship, and also of hardship to the workman through inability to collect his bill. This, however, is no new condition of trade, and as furnace heating

still continues popular, notwithstanding these drawbacks, it is probable that this system of heating will always have to bear the criticism, comparison and denunciation which such faulty work naturally brings.

THE SUCCESS OF SCIENTIFIC FURNACE WORK.

The better class of furnace work, however, brings credit enough to offset these drawbacks. Some of the handsomest residences and buildings erected in the United States are heated with hot air furnaces, and to the struggling tin-smith who, under competition, has installed a furnace to heat a whole building for \$50 or \$75, it would seem like a monstrous falsehood if he was informed that a building occupying a ground space of 50 by 150 feet was heated satisfactorily with a hot air furnace system with a fuel expenditure not in excess of that which would be required by any other heating system, and that the payment for this plant was over \$2,000. Plants of this character and cost, however, are installed by experts in various sections of the country.

The furnaceman who is not getting the profit from his business that he should secure would do well to study the methods of the men who secure these big prices and proportionate profits. They do not rely upon their personal experience to judge the required size of furnace and pipes, but enter into a careful calculation of the space to be heated, the wall surface and the glass surface. They do not rely upon standard sizes of piping and wall stacks for their work, but make special wall stacks and hot air pipes adapted to the requirements of each room in accordance with the wall and glass surface and its northern or western or other exposure. It is not strange that instead of being forced to locate the battery of furnaces in one corner of the cellar such men are allowed to locate the furnaces in the cellar, the registers in the different rooms, and the wall stacks in such places as will enable them to insure the heating of the building.

Those who secure what is generally considered the cream of the furnace trade are far more systematic in their work, more painstaking in their methods of determining the sizes of the various parts of the apparatus and much more tactful in securing concessions from the architects and owners than those who are willing to compete for unprofitable operation furnace work. Guesswork, even when backed by long experience, is not resorted to by these leaders in the furnace business. They believe that what is worth doing is worth doing well, and they carefully consider the dimensions of wall, glass, grate, pipe and every part. They believe what is worth having is worth paying for, and they get a price that pays for their careful preparation to in-

sure a successful job. By these painstaking methods they become thoroughly conversant with every detail of their work and can explain what is necessary, so that the architect, the builder and the owner concede what they require. Otherwise they do not take the work.—Metal Worker.

A Brightly Lighted Factory.

ANYONE going along Ontario street east, in Montreal, between four thirty and six in the evening, cannot fail being struck by the bright appearance of a large building situated just north of the corner of Joanne d'Arc street. The view from the exterior is rather inviting, and on entering the visitor's favorable impression is increased rather than diminished. It is the factory of the Acme Can Works, whose progressive policy is well known, and who have recently shown commendable enterprise in installing their own system of gas lighting. That it is a success is told at a glance, as every nook and corner of the spacious main building both upstairs and down is well illuminated. The management of the company are enthusiastic over the good results obtained, not only in additional light but in a saving of several thousand dollars a year as well.

The gas is generated from crude petroleum, brought to the works in tank cars and stored in a 6,000 gallon tank buried in the ground at some distance from the building. Close to the building, and likewise covered in, a 250 gallon tank is placed. Thus any great fire danger that might otherwise be incurred is done away with, and the immediate supply is obtained from the smaller tank. It is then pumped to the gas generator. The generator consists of six metal tanks about two feet in diameter, and nine feet high, connected in series. Into the first of these air is pumped and heated to a temperature of 120 deg. at 1 lb. pressure. It is sent through the next two in turn each of which contains a quantity of the crude oil, supplied from the pump below. The four other tanks are fitted with compartments containing perforated zinc and fine wire gauze. Through these the oil saturated air or gas passes, emerging from the last into the main high quality of dry illuminating gas. Only when there is a demand upon the generator is any gas made. One feature of this gas is that it requires a Bunsen or other special form of burner, and will not light from an ordinary gas jet. Bunsen burners and ordinary gas mantels are used, and a very bright, intense white light is the result. The plant was installed by the Acme Gas Co., of Chicago, and is giving every satisfaction.



Overstocked!!

Too many stoves on hand.
Must clear them out this month.

**Special price to move
them.**

THE COLLINS COMBINATION WOOD AIR-TIGHT HEATER AND BAKER is a new idea in stove making; cooks and heats at the same time. For light house-keeping it cannot be excelled. Useful for kitchen, dining-room, or bedroom. Oven made of two layers of Sheet Steel interlined with Asbestos.

Retails for \$10.00.

Good discount to clear.

Send for Catalogue of Stoves and other Hardware Specialties.

THE COLLINS MFG. CO.

34 Adelaide Street W., - Toronto.

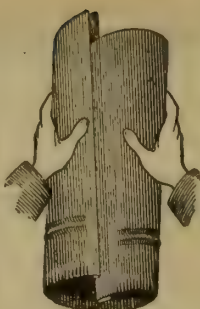


MOPS The Tarbox kind

Self-wringing. No soiled, scalded, chapped hands.
No necessity whatever to even wet the hands.
No sore knees, no tired out back.
Don't you see the arguments you can use?
The best mop in the world.
The best wholesalers supply them.

Manufactured by

TARBOX BROS., = Toronto, Canada



Ask Your Jobber FOR IDEAL STOVE PIPE

A special discount will be given on a trial order. It will pay you. We are then sure you will handle no other make.

St. Arnaud Freres
425 St. Paul St., MONTREAL



YORK METAL POLISH (Liquid or Paste.)

is matchless for giving a quick, lasting and brilliant polish to all metal surfaces capable of taking a polish.

Order from your jobber.

Sample tin free.

Anglo-Canadian Supply Co.
29 Church-St., Toronto.

OAKEY'S 'WELLINGTON' KNIFE POLISH

JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and
Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

**JOHN FORMAN, 644 Craig Street
MONTREAL.**

How to Increase Trade.

RURAL NEW YORKER contributes to the Metal Worker the following article on the ever interesting subject of how to increase trade:

This year has not seen the great rush to promote large business enterprises that was witnessed a few years ago; yet a number of changes have been quietly taking place among existing corporations in bringing out new departments or extending the scope of those already formed. There has been quite a movement among small dealers, however, in the direction of combination with others in allied lines, while some have enlarged their business by branching out into new lines. For example, a plumber and steam fitter who deals in stoves will open a tinware department and do all kinds of sheet metal work. Expansion of such a character is founded on sound economic principles, and if properly managed should bring satisfactory results. Take, for example, an establishment such as above referred to, situated in a country town, and dealing in stoves, with a shop equipped for doing plumbing and heating work. Business in the shop will be brisk during the Summer months, but few sales will be made in the store. When the Fall approaches the trade in stoves and ranges will become active, but from December 1 until April 1 there will be very little to do, except odd jobs and such building operations as may have been delayed or are carried on through the Winter. During dull times or when some of the too frequent strikes among the building trades may be in operation there will be scarcely enough business doing to justify keeping the shop open.

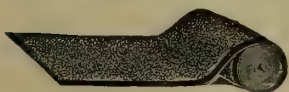
On the other hand, a business that embraces stoves, tinware, furnaces and steam and hot water fittings as well as plumbing, will be able to operate at a relatively lower cost, as the expense for rent, fuel and light will not be increased in proportion to the increased output. Usually the office force will be no larger, and if collectors are kept at work outside the same force can attend to the work, as the additional business will be in the amount of accounts rather than in an increased number of accounts. The increase in the item of labor will be in direct proportion to the work done, so no saving will be directly accomplished here. But the increase will be made up on other items.

Thos. Birks has been appointed curator to O. J. Beauchamps, general merchant, Ste Rose DeLima. An offer of compromise at 10c on the dollar has been submitted to the creditors.

PERSONAL MENTION.

Mr. J. A. Marion, head of the firm of Marion & Marion, civil engineers and patent solicitors, died at his home on Sherbrooke street, Montreal, last week. Mr. Marion was one of the best known men in Canada in his line of business and he had succeeded in building up a very successful practice. He was a graduate of the Polytechnic School and Laval University.

A PERMANENT
and Handsome Roof.



Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write to-day.



Solarine Bar Polish

Best and cheapest preparation for polishing:— Brass, Copper, Steel, Tin, Zinc, Bar Fixtures, Kitchen Utensils.

A rapid cleaner expressly designed for all kitchens.

For Ontario, Address

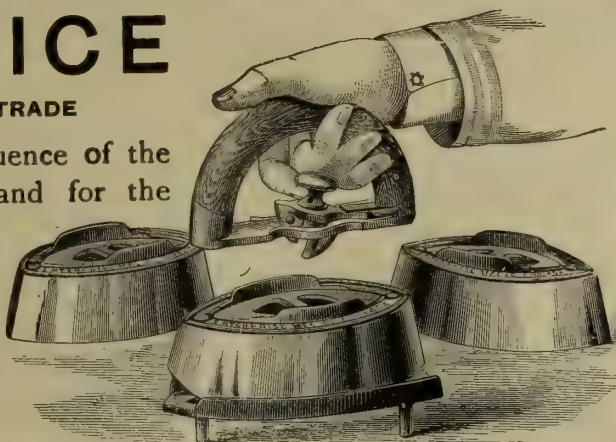
H. F. FALKNER,
60 George St., TORONTO

Mrs. Potts Sad Irons
OLD PATTERN

NOTICE

TO THE TRADE

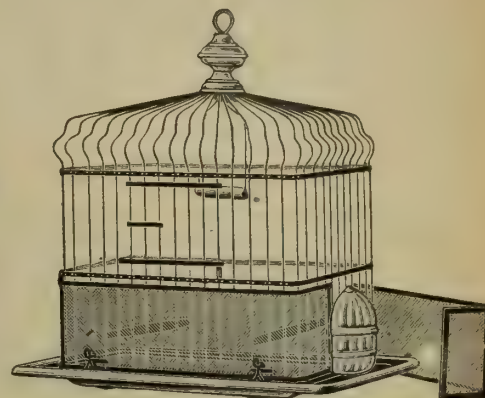
In consequence of the continued demand for the genuine Mrs. Potts Irons, we will accept orders deliverable after Jan'y. 1st next.



Please bear in mind that we use the same grinding machinery as is now being used by the Enterprise Co. of Philadelphia. We claim ours to be the only perfect ground and polished irons on the market.

The H. R. IVES CO., Limited, = Montreal

CAGES



Bird Cages, Japanned and Brass, Parrot Cages, Squirrel and White Rat and Mouse Cages, Breeding Cages. The most complete line of Cages manufactured on this continent. Styles, sizes and prices to suit every purchaser.

E. T. WRIGHT & CO., Manufacturers,
HAMILTON.

Christmas Specialties

RETURNED



Delft Tea Pots

Hand Painted, with Nickel plated Trimmings, Three Sizes.

Delft Tea Pot Stands

Nickel Plated Trimmings, Two Sizes 6 and 7 inches.

Very Attractive and Fast Moving.

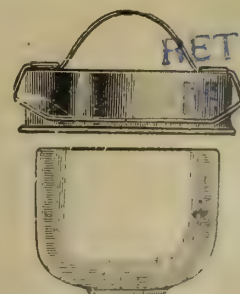
"Queen" Pudding Mould

Covered for Boiling or Steaming, Six Sizes, Nos. 12, 14, 16, 18, 20 and 22.

Needed in every home at this period of the year.



Closed



Open

The Thos. Davidson Mfg. Co., Limited
Montreal

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

SIR WM. VAN HORNE, president of the Laurentide Paper Co., has arranged for an issue of \$1,200,000 preferred stock. The last annual statement of the company shows an indebtedness of \$797,179 to the Bank of Montreal and it is the intention that the entire amount shall be paid off with the new issue. The remainder will go towards improvements at the company's plant at Grand Mere.

A license of occupation for timber and mineral claims on Hunter's Island in the Rainy River District has been issued from the Department of Crown Lands to a number of American capitalists. The licensees undertake to sink shafts and begin operations about the first of the year, expending not less than \$25,000 the first year, \$40,000 the second year and \$35,000 the third year.

Lumbermen are somewhat discouraged at the falling off of exports to Great Britain this season. The shipments to England show a diminution of fifty-four per cent. compared with last year's figures, and fifty per cent. from those of 1902. This year 143,250,000 feet were sent to England as compared with 295,000,000 last year. The falling off is attributed to increased shipments to the States and the impression in England that Canadian prices are too high.

The Miramichi Pulp Mill Paper Co., which bought the Sulphite Company's property at Chatham, is preparing for an active season. The manager expects to start the works about January 1st and will employ from 125 to 150 men. Already some 5,000,000 feet of lumber have been bought, and the company have arranged to cut about 15,000,000 feet this Winter. It is the intention to go into the manufacture of paper, and a large factory will be erected before the season of 1906.

Millions will be spent in the International Falls Territory by the Rainy River Improvement Association, backed by Minneapolis capitalists who filed articles of incorporation with \$5,000,000 capital. The company is to build a \$300,000 concrete dam across the Rainy River to raise the level in the lake and furnish more power. It will build a flour and paper mill on the Canadian side and a saw and paper mill on the American

side. The dam when completed is expected to furnish 30,000 horse-power.

The Canadian Minister of Marine and Fisheries recently announced that the Canadian Parliament will soon take final action favorable to the beginning of the work on the proposed canal from Georgian Bay to the St. Lawrence River, through Lake Nipissing and the Ottawa River. Two hundred and fifty thousand dollars has already been appropriated to enable complete exploration to be done. It is asserted that this canal would make five or six States of the United States tributary to the seaboard through the canal.

The November output from the Dominion Coal Co.'s mines was 232,720 tons, being 61,318 tons less than the output for October. The closing of the St. Lawrence trade for the season will cause a considerable decrease during the next few months, although so far shipments from Louisburg have been fairly brisk. The output of the several mines was as follows: Dominion No. 1, 43,551 tons; Dominion No. 2, 49,325 tons; Dominion No. 3, 22,484 tons; Caledonia, 44,856 tons; Reserve, 44,344 tons; Hub, 9,505 tons; International, 18,655 tons. The total shipments were 215,746 tons.

F. A. Routh & Sons, the Montreal agents for the Nova Scotia Steel and Coal Co., have completed a report showing the total amount of bituminous coal brought up the St. Lawrence route during the season of navigation of 1904. The comparative report for the season as compared with last year is as follows:

	1903.	1904.
N. S. Steel & Co.	159,618	170,319
Dominion Coal Co.	846,137	1,116,191
Newcastle Syndicate.	12,815	14,305
Port Hood Coal Co.	21,374	4,634
Inverness Coal Co.	17,784	43,441
Intercolonial Coal Co.	44,248	39,349
Acadia Coal Co.	4,277	15,134
Scotch and English Coal.	134,339	47,961
American.	2,748	3,031
Malton.		780
	1,223,340	1,455,145

That the reorganized industries at Sault Ste. Marie are enjoying a prosperous career is quite evident. The first half-year's interest on the loan of \$2,000,000 at five per cent. guaranteed by the Ontario Government, and amounting to \$50,000, was paid when it fell due last month. Also on the 1st of December when the first instalment of interest,

totalling \$250,000 fell due, an amount large enough to cover this demand was taken out of the earnings of the company and placed in a New York bank at the disposal of the syndicate holding the mortgage bonds of the Lake Superior Corporation. The pay list for October shows 3,934 persons in their employment, with the amount of wages being paid aggregating \$127,000.

NOTES.

Ore to the value of \$20 per ton has been discovered in the district surrounding Fort William, Ont.

The new machinery is being placed in the new mill erected by the Griswold Milling Co., Griswold, Man.

The Roofers Supply Co., Toronto, have secured permission to increase their capital from \$20,000 to \$60,000.

The Koochiching Co., according to the Fort Frances Times, has sent in a letter of incorporation to the authorities of the State of Minnesota.

There is a rumor current to the effect that S. Gillespie, the expert autobuilder of Quebec, wishes to establish a large factory in London, Ont.

The sawmill of the Sprague Lumber Co., Winnipeg, has closed down after a successful season having cut on a conservative estimate 9,000,000 feet of lumber.

The American Trimotor Co., of Sharon, Pa., has sold Canadian patent rights to a syndicate in this country for \$500,000. The rights are to extend over a period of 15 years.

The Bank of Montreal and N. W. Harris & Co., bankers, Boston, New York and Chicago, have purchased from the Winnipeg Electric Railway Company \$2,000,000 first refunding mortgage thirty year five per cent. sinking fund gold bonds.

The St. John Electric Light Co., which is connected with the Montreal Heat, Power and Light Co., are installing in a new building erected for the purpose, a switchboard and accessories to supply the town of St. Johns, Que., with light and power.

COMPANIES INCORPORATED.

The Electrical Floor Patent Co., Montreal, capital \$250,000; purpose to purchase and manufacture machinery patents. The directors are: E. S. Clouston, Sir Geo. Drummond, C. R. Hosmer, Sir H. Allan, F. W. Thompson, and H. S. Holt, all of Montreal.

The Western Coral Marble Co., of Chatham, Limited, Chatham, Ont., capital \$40,000; purpose to manufacture and sell such articles known as coral marble, Myconeian marble and wood grain veneer. The directors are: B. Blonde, W. M. Drader, and C. R. Charteris, all of Chatham.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
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U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,

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Totten P.O., Virginia.

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Order a stock of

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John Summers & Sons, Ltd.

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Weekly output 2,000 tons of sheets.
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CORRUGATED IRON

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

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TORONTO, ONT.



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Heavy Red-Brown Wrapping

FOR EXPRESS PARCELS.

STRONG, TOUGH AND STIFF

CANADA PAPER CO.

TORONTO LIMITED MONTREAL

SAMPLES AND
PRICES GLADLY
SENT.

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—It beats all.

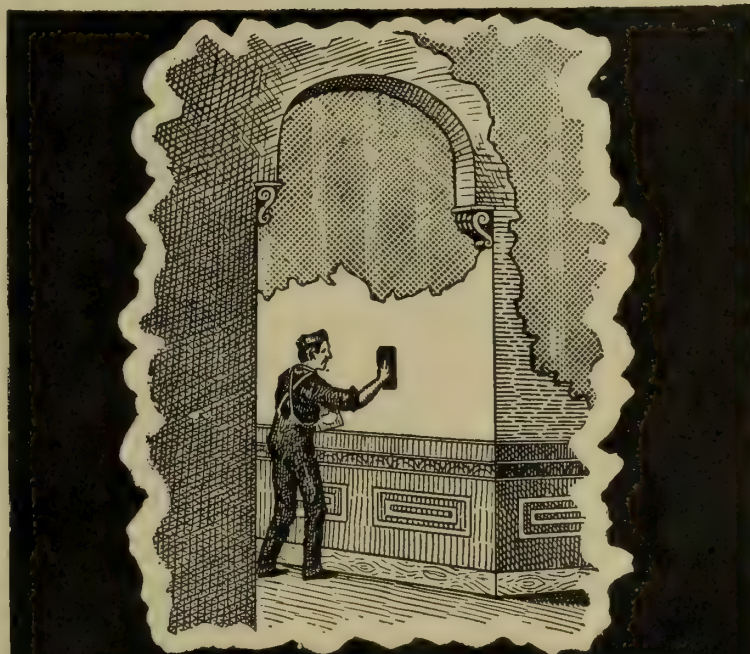
—To think of being able to
sell an All Metal Ash Sifter
for 25c. and make a profit!

58

An Ash Sifter, made of galvanized iron and wire—won't, can't come apart—sells for 25c. And it does its work—never another sifter that did it better

Circular describes it, but an order proves it. We ship to the Klondike if desired.

C. M. CUTTS & CO., SOLE MAKERS Toronto Junction, Ont.



Pedlar's "Perfect" Metal Lath

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.

24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.**

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

GALVANIZED IRON RANGE BOILERS.		
Capacity. Gals.	Standard.	Extra heavy
12	4.00	6.00
18	4.25	6.00
24	4.50	6.50
30	4.50	6.50
35	5.50	7.50
40	6.50	8.50
52	10.50	13.00
66	16.00	19.00
82	19.00	22.00
100	24.00	29.00
120	28.00	35.00

SOIL PIPE AND FITTINGS.
Med. and Extra heavy pipe and fittings, dis. 60 per cent.
7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.	Per lb
Bar, half-and-half, guaranteed	0 18
Bar, half-and-half, commercial	0 17

PAINTS AND OILS.

COLORS IN OIL.	
1-lb. tins, pure.	
Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French "	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black.	0 15

WHITE LEAD.	
Per 100 lb.	
Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	4 75
Ramsay's Pure Lead	5 00
Ramsay's Exterior	4 50

RED LEAD.	
Genuine, 560 lb. casks, per cwt	
	\$4 25 \$4 50
Genuine, 100 lb. kegs,	4 75
No. 1, 560 lb. casks, per cwt	4 00
No. 1, 100 lb. kegs, per cwt	4 25

WHITE ZINC.	
Extra Red Seal	
	0 06 0 08
French V. M.	0 06 0 06½
Lehigh.	0 06 0 06½

DRY WHITE LEAD.	
Pure, casks	
	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.	
In ½, 1 and 1-gallon tins.	
Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60 0 90
The Sherwin-Williams paints	1 35
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Blue" barn	60 70
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle,	1 00
"Outside, bbls	0 55 0 65
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.		
Bulk in bbls.	1 50	1 45
Bulk in less quantity	1 70	
Bladders in bbls.	1 70	
Bladders in kegs, boxes or loose	1 85	
25-lb. tins	1 80	
12½ lb. tins	2 05	
Bladders in bulk or tins less than 100 lb.	1 85	

VARNISHES.		
In 5-gal. lots.		
Per gal.	Net.	
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
"orange	2 30	2 40
Purpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granitine floor finish, per gal	2 75	
Maple Leaf coach enamels, size 1,	\$1.20;	
size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, assorted		
case, from	to 1 gal., \$2.50.	

GLUE.		
Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatin	0 18	0 20
Strip	0 19	0 20
Coopers	0 19	0 20
Huttner	0 12	0 16
Ground	0 12	0 16
Cologne, genuine	0 12	0 16

HARDWARE.

AMMUNITION.		
Cartridges.		
B. B. Caps Dominion, 50 and 5 and 25 per cent.		
American \$2.00 per 1000.		
C. B. Caps American, \$2.60 per 1000.		
Rim Fire Pistol, discount 30 p.c., American.		
Rim Fire Cartridges, Dominion, 50 and 5 p.c.		
Central Fire, Military and Sporting, American, vdd 20 per cent. to list. B. B. Caps, discount 40 per cent., American.		
Central Fire Pistol and Rifle, list net Amer.		
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.		
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American		
10 per cent. advance on list.		
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.		
American 20 per cent. discount. Rival		
and Nitro, 10 per cent. advance on list.		
Brass Shot Shells, 55 per cent.		
Primers, Dom., 30 per cent.; American, \$1.75		
Wads, per lb.		
Best thick brown or grey felt wads, in ½-lb. bags	\$0 70	
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99	
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35	
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20	
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25	
Chemically prepared black edge grey cloth wads, in boxes of 250 each—		
11 and smaller gauge	0 60	
9 and 10 gauges	0 70	
7 and 8 "	0 90	
5 and 6 "	1 10	
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—		
11 and smaller gauge	1 15	
9 and 10 gauges	1 40	
7 and 8 "	1 65	
5 and 6 "	1 90	

ADZES.		
Discount 20 per cent.		
ANVILS.		
Wright's, 80-lb. and over	0 10½	
Hay Budden, 80-lb. and over	0 09½	
Brook's, 80-lb. and over	0 11½	

APPLE PARERS.		
Woodyatt Hudson, per doz., net	4 50	
AUGERS.		
Gilmour's, discount 65 and 5 per cent. off list.		

AXES.		
Chopping Axes		
Single bit, per doz.	7 00	10 00
Double bit, "	10 00	18 00
Bench Axes, 40 per cent.		
Broad Axes, 25 per cent.		
Hunters' Axes	5 50	6 00
Boys' Axes	6 25	7 00
Splitting Axes	7 00	12 00
Handled Axes		10 00

AMERICAN AXE AND TOOL CO.		
Red Ridge, boys' handled	5 75	
"hunters"	5 25	
Underhill American Bench Axes, 40 p.c.		

AXLE GREASE.		
Ordinary, per gross	6 00	7 00
Best quality	10 00	12 00

BELLS.		
Hand.		
Brass, 60 per cent.		
Nickel, 55 per cent.		

Cow.		
American make, discount 63½ per cent.		
Canadian, discount 45 and 50 per cent.		
Door.		
Gongs, Sargent's	5 50	8 00
"Peterboro", discount 50 and 10 per cent. off new list.		
Farm.		
American, each	1 25	3 00
House.		
American, per lb.	0 35	0 40

BELTING.		
Extra, 60 per cent.		
Standard, 60 and 10 per cent.		
No. 1, not wider than 6 in., 60, 10 and 10 per cent.		
Agricultural, not wider than 4 in., 75 per cent.		

BITS.		
Auger.		
Gilmour's, discount 60 per cent.		
Rockford, discount 50 and 10 per cent.		
Jennings' Gen., net list.		
Car.		
Gilmour's, 47½ per cent.		
Expansive.		
Clark's, 40 per cent.		

Dimlet.		
Clark's, per doz	0 65	0 90
Diamond, Shell, per doz	1 00	1 50
Nail and Spike, per gross	2 25	5 20
BLIND AND BED STAPLES.		
All sizes, per lb.	0 07½	0 12

BOLTS AND NUTS		
Carriage Bolts, common (\$1 list)		
	Per cent.	
" 3-16 and ½"	60 and 10	
" 5-16 and ¾"	55 and 5	
" 7-16 and up	55 and 5	
" full sq. (\$2.40 list)	60	
" Norway Iron (\$3 list)	60	
Machine Bolts, all sizes, ½ and less	60	
Machine Bolts, 7-16 and up	60	
Plough Bolts	55 and 5	
Blank Bolts	55 and 5	
Sleigh Shoe Bolts	55 and 5	
Coach Screws, cone point	70	
Nuts, square, all sizes, 4c. per lb. off.		
Nuts, hexagon, all sizes, 4c. per lb. off.		
Stove Rods, per lb., 5½ to 6c.		

ROOT CALKS.		
Small and medium, ball	per M.	4 25
Small heel	"	4 50
BRIGHT WIRE GOODS.		
Discount 62½ per cent.		
BUTCHERS' CLEAVERS.		
German	per doz.	6 00 9 00
American	"	12 00 18 00
BUTCHER KNIVES.		
Bailey's	per doz.	0 60 6 30

BUILDING PAPER, ETC		
Tarred Felt, per 100 lb.		1 85
Ready roofing, 2-ply, not under 45 lb. per roll		0 90
Ready roofing, 3-ply, not under 65 lb. per roll		1 15
Carpet Felt	per ton	45 00
Heavy Straw Sheathing	per ton	35 00
Dry Sheathing	per roll, 400 sq. ft.	0 40
Tar	" 400 "	0 50
Dry Fibre	" 400 "	0 55
Tarred Fibre	" 400 "	0 65
O. K. & I. X. L.	" 400 "	0 70
Resin-sized	" 400 "	0 45
Oiled Sheathing	" 600 "	1 00
Oiled	" 400 "	0 70
Roof Coating, in barrels	per gal.	0 17
Refined Tar	small packages	0 25
Coal Tar	per barrel	4 00
Coal Tar, less than barrels	per gal.	0 15
Roofing Pitch	per 100 lb.	1 00
Slater's felt	per roll	0 60

BULL RINGS.		
Copper, \$2.00 for 2½-inch, and \$1.9 or 2-inch		

BUTTS.		
Wrought Brass, net revised list.		
Cast Iron.		
Loose Pin, discount 60 per cent.		

Wrought Steel.		
Fast Joint, discount 70 to 70 and 5 per cent.		
Loose Pin, discount 70 to 70 and 5 per cent.		

CARPET STRETCHERS.		
American	per doz.	1 00 1 50
Bullard's	"	6 50

CASTORS.		
Bed, new list, discount 55 to 57½ per cent.		
Plate, discount 52½ to 57½ per cent.		

CATTLE LEADERS		
Nos. 32 and 33	per gross	7 50 8 50

CHALK.		
Carpenters' Colored, per gross	0 45	0 75
White lump	per cwt.	0 60 0 65
Red	"	0 05 0 06
Crayon	per gross	0 14 0 18

CHISELS.		
Socket, Framing and Firmer.		

Broad's, discount 60 and 10 per cent.		
Warnock's, discount 50 and 10 per cent.		
P. S. & W. Extra, discount 60 and 10 per cent.		

FOODS—STOCK.		
Colonial Stock Foods, 50c. packages,		
" " " 25c. pkgs.,	per doz	\$4 00
" " " 10c. "	"	2 00
" " " 25-lb. pall, each	"	1 80
Poultry Foods, 25c. packages	"	1 25
Cough Powders, per doz	"	1 25
Worm	"	1 25

International 1 Stock Foods, \$1 packages,		
per doz.		8 00
International Stock Foods, per pall		2 75
" " " 1 per bbl.		10 50
" " " \$1 per doz.		8 00
" " " 25c. pkgs.		4 00
" " " Pine Healing Oil, per doz		8 00
" " " Pheno-Chloro, 81 pkgs., per doz		8 00
" " " Hoof Ointment		8 00
" " " Compound Absorbent		16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.		

CLOTHES REELS.		
Davis Clothes Reels, dia. 40 per cent		

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.			GAUGES.			Clothes line, No. 61..			Cabinet.		
Plain or Corrugated.			Marking, Mortise, Etc.			" "			Eagle, discount 30 per cent.		
2-inch	per 100 feet	3 00	Stanley's, discount 50 to 55 per cent.			" "			Padlocks.		
3 "	" "	4 00	Wire Gauges.			Hat and coat			English and Am. per doz.		
4 "	" "	5 25	Winn's, Nos. 26 to 33			per gro.			Eagle, discount 20 to 25 per cent.		
5 "	" "	6 75	GILLET'S POWDERED LYE.			Chandelier			MACHINE SCREWS.		
6 "	" "	9 00	1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.			Wrought Iron.			Flat head, discount 25 per cent.		
CRADLES, GRAIN.			HALTERS.			Wrought hooks and staples			Round head, discount 20 per cent.		
Canadian, discount 20 to 25 per cent.			Rope, 1-inch			Canadian dis-			MAILLETS.		
CROSSCUT SAW HANDLES.			Rope, 1 to 1 1/2-inch			count 60 per cent.			Tinmith's		
S. & D., No. 3	per pair	0 17 1/2	Rope, 1 1/2 to 2-inch			"P.B." Brand, 55 to 60 per cent.			Carpenters', hickory,		
S. & D., " 5	" "	0 22 1/2	Leather, 1-inch			"C" brand, 40, 10 and 7 1/2 per cent. off list			Lignum Vitae		
S. & D., " 6	" "	0 15	Web			"M" brand, 55, per cent.			Caulking, each		
Boynton pattern	" "	0 20	HAMMERS.			"Monarch," 50 and 7 1/2 per cent.			MATTOCKS.		
DOOR SPRINGS.			Nail.			"Peerless" 50 per cent. dis.			Canadian		
Torrey's Rod	per doz.	1 85	Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27 1/2 per cent.			HORSESHOES.			per doz.		
Coil, 9 to 11 in.	" "	0 95	Tack.			F.O.B. Montreal			MEAT CUTTERS.		
English	" "	2 00	Magnetic			"P.B." brand, new pattern, base			American, discount 3 1/2 per cent.		
DRAW KNIVES.			Sledge.			"M." brand, base			German, 15 per cent		
Coach and Wagon, discount 50 per cent.			Canadian			Add 15c. Toronto, Hamilton, Guelph.			Gem		
Carpenters' discount 60 and 10 per cent.			Ball Peen.			JAPANNED WARE.			Discount 25 per cent.		
DRILLS.			50 per cent.			NAILS.					
Hand and Breast.			English and Canadian, per lb.			Cut					
Miller's Falls, per doz., net list.			0 22			2d					
DRILL BITS.			HANDLES.			3d					
Morse, discount 37 1/2 to 40 per cent.			Axe, 2nd growth, per doz. net			4 and 5d					
Standard, discount 50 and 5 to 55 per cent.			Store door			6 and 7d					
FAUCETS.			Fork.			8 and 9d					
Common, cork-lined, discount 35 per cent.			C. & B., discount 40 per cent., revised list.			10 and 12d					
RAVETROUGHS.			Hoe.			16 and 20d					
10-inch	per 100 ft.	10 00	C. & B., discount 40 per cent., revised list.			30, 40, 50 and 60d (base)					
ELBOWS (stovepipe.)			Saw.			Cut nails in carlots 5c. less.					
5 and 6-inch, common	per doz.	1 20	American			Wire nails in carlots are \$2.20 (base).					
Polished, 15c. per dozen extra.			1 25			Steel cut nails 10c. extra.					
ESCUTCHEONS.			Miscellaneous wire nails, discount 15 per cent.								
Discount 50 and 10 per cent., new list			3 15			Coopers' nails, discount 30 per cent.					
ESCUTCHEON PINS.			NAIL PULLERS.								
Iron, discount 40 per cent.			Canadian, discount 40 per cent.			German and American					
FACTORY MILK CANS.			KNOBBS.								
Discount off revised list, 40 per cent.			Steel barn door			Door, japanned and N.P., per doz.					
FILES AND RASPS.			1 50								
Great Western	70 and 10 per cent.		8 00			2 50					
Arcade	70 " 10 "		4 50			2 75					
Kearney & Foot	70 " 10 "		6 00			3 25					
Diston	70 " 10 "		9 00			6 00					
American	70 " 10 "		Lamp's covered—			1 30					
J. Barton Smith	70 " 10 "		No. 11, 5-foot run			2 00					
McClellan	70 " 10 "		No. 11 1/2, 10-foot run			Net prices.					
Eagle	70 " 10 "		No. 12, 10-foot run			Discount, 60 per cent.					
Nicholson, 60 and 10 to 60, 10 and 5			No. 14, 15-foot run			LAMP WICKS.					
Royal	80 " 10 "		Steel, covered			LADDERS, EXTENSION.					
Globe	70 to 75 " 10 "		" track, 1 x 3-16 in (100 ft.)			Wagoner Extension Ladders, dis. 40 per cent.					
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.			" 1 1/2 x 3-16 in (100 ft.)			LANTERNS.					
Jowitt's, English list, 25 to 27 1/2 per cent.			4 75			Cold Blast					
HATCHETS.			No. 3, "Wright's"								
Discount 60 per cent.			Ordinary, with O burner								
Canadian, discount 40 to 42 1/2 per cent.			Dashboard, cold blast								
Shingle, Red Ridge 1, per doz.			No. 0								
2,			Japanning, 50c. per doz. extra.								
Barrel, Underhill,			LEMON SQUEEZERS.								
HAT ENAMEL.			Porcelain lined								
Henderson & Potts' "Anchor Brand"			Galvanized								
HINGES.			King, wood								
Blind, Parker's, discount 60 per cent.			King, glass								
Heavy T and strap, 4-in., per lb.			All glass								
5-in.			LAWN MOWERS FOR 1905.								
8-in.			Woodyatt, 10 1/2-in., 14-in. cut								
10-in.			Star								
Light T and strap, discount 65 and 5 per cent			Daisy								
Screw hook and hinge—			Philadelphia, 7 1/2-in.								
6 to 10 in.			Woodyatt, 10 1/2-in., ball bearing								
12 in. up			Grass Boxes								
Spring, No. 20, per gro. pairs			King Edwd, 12-in., 14-in. cut								
Spring, Woodyatt pattern, per gro. No. 5,			Discount, 50 per cent., with freight concessions in quantity shipments.								
\$17.50; No. 10, \$18; No. 20, \$10.80; No. 120, \$20; No. 51, \$10; No. 50, \$27.50.			Maxwell & Sons:								
HOES.			10 1/2-in. high wheel								
Garden, Mortar, etc., discount 60 per cent.			9-in.								
Planter			8-in.								
HOLLOW WARE.			Discount 50 per cent.								
Tinned cast, 35 per cent.			LOCKS.								
HOES.			Canadian, 50 to 50 and 10 per cent								
Cast Iron.			Russell & Erwin								
Bird cage			per doz.								



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37 1/2 to 40 per cent.		Hand, Disston's, discount 12 1/2 per cent		Poultry netting staples, discount 40 per cent.		10 per cent.	
Button's imitation.....per doz.	5 00 9 00	S. & D., discount 40 per cent.		STOCKS AND DIES.		Granite or Pearl, Imperial, Crescent, discount	
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PULLEYS.		frame only.....each	0 50 1 25	Hindustan....."	0 06 0 07	25 per cent.	
Hothouse.....per doz.	0 55 1 00	SASH WEIGHTS.		"slip....."	0 09 0 09	WIRE.	
Axle....."	0 22 0 33	Sectional.....per 100 lb.	2 00 2 25	Labrador....."	0 13 0 13	Smooth Steel Wire.	
Borew....."	0 27 1 00	Solid....."	1 50 1 75	"Axe....."	0 15 0 15	No. 0-9 gauge.....	\$2 25
Awning....."	0 35 2 50	SASH CORD.		Turkey....."	0 90 0 90	10.....	60 extra.
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Conductors....."	3 00 15 00	SCALES.		STOVEPIPIES.		16.....	700 "
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"hollow.....per inch	1 00 1 00	Gurney Champion, 50 per cent.		7 inch.....	7 50 7 50	Extra net per 100 lb.—Oiled wire 10c.,	
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Copper Rivets, with usual proportion burrs, 45		"R. H., "dia. 75 per cent.		Saddle nail, in papers.....	10	30 days, f.o.b. factory.	
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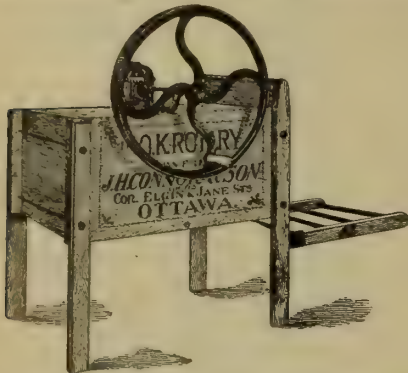


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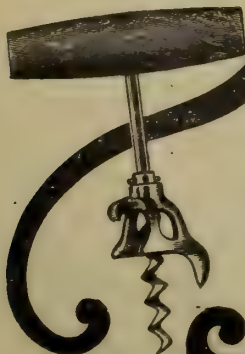
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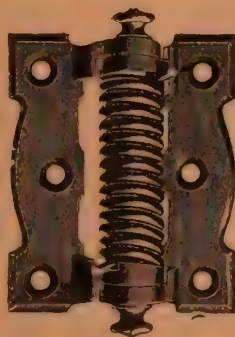


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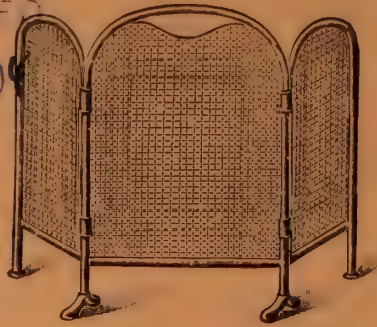
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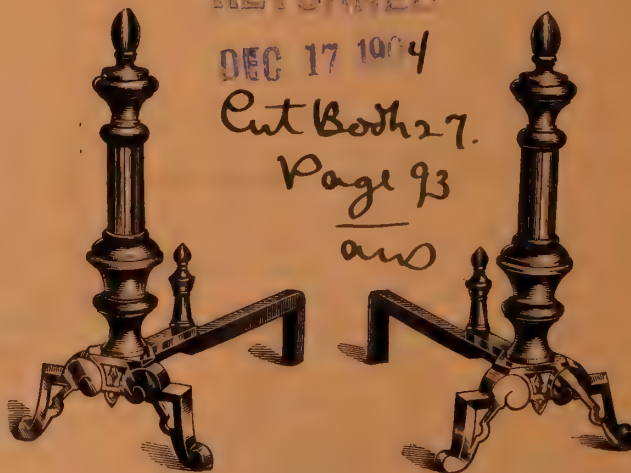
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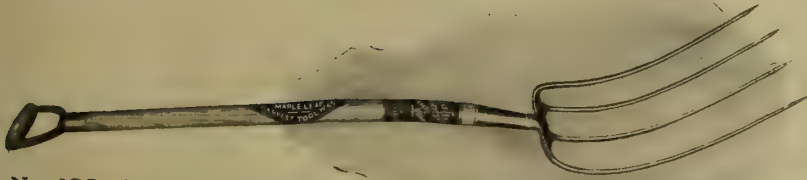
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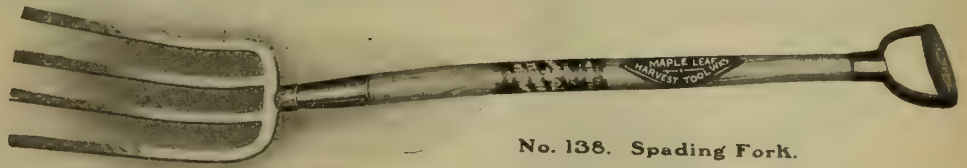
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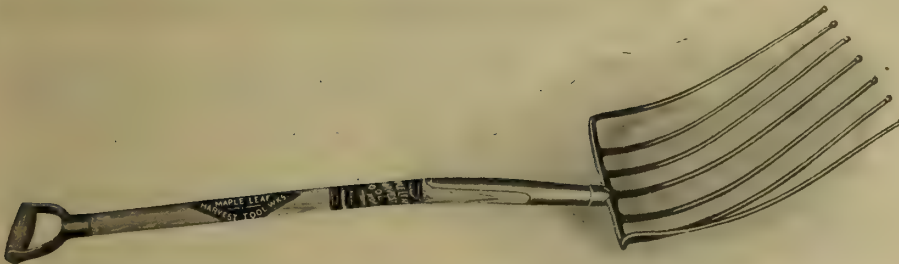
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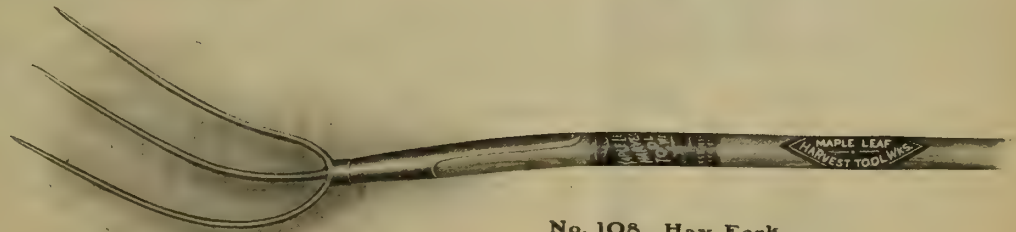
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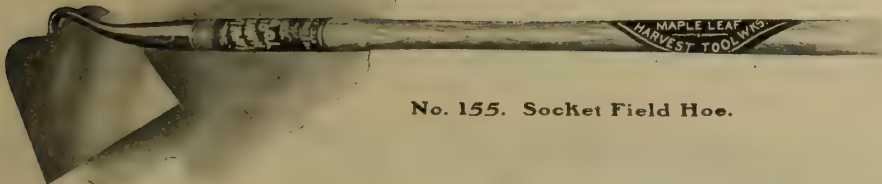
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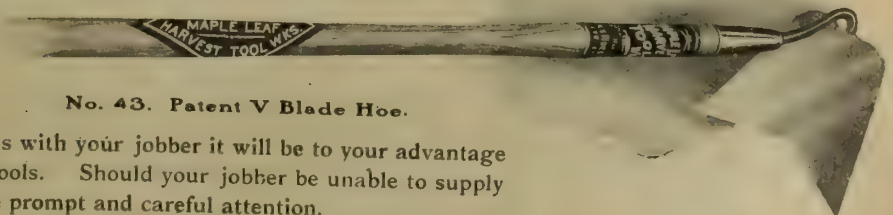
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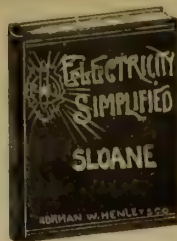


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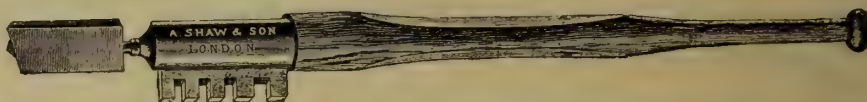
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388 ST. PAUL ST., MONTREAL

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HEINISCH SHEARS

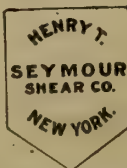
Tailors' Shears,
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Tinners' Snips, etc.



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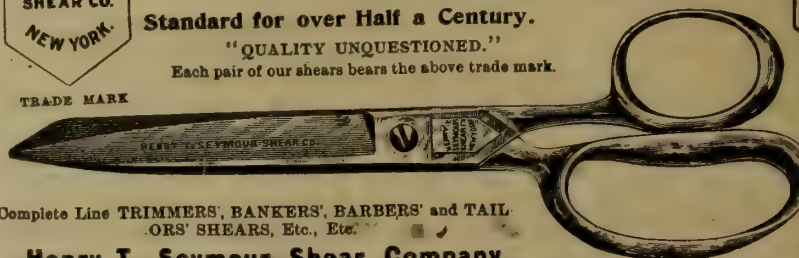
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Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

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Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.

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Come Out
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Bring your "ads" with you.

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By doing so you illumine and release from obscurity many a cheerless "type ad" that is suffering for the want of a little pictorial light.

We furnish the kind of pictures that give to your "ads" a bright and smiling countenance. A cheerful face gains favor every time.

Estimates on all and every style of design cordially furnished.

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ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the

NIAGARA WIRE LINK
OPEN RING TYPE.

Also made in CLOSED RING, THREE CHAIN
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Oneida Community Cow Ties can be had of all
the leading jobbers. We invite correspondence
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ANNEALED WIRE

FOR BALING

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Steel Wire Hoops

For all Kinds of Barrels.

They are stronger, and when properly placed
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WRITE FOR SAMPLES AND PRICES

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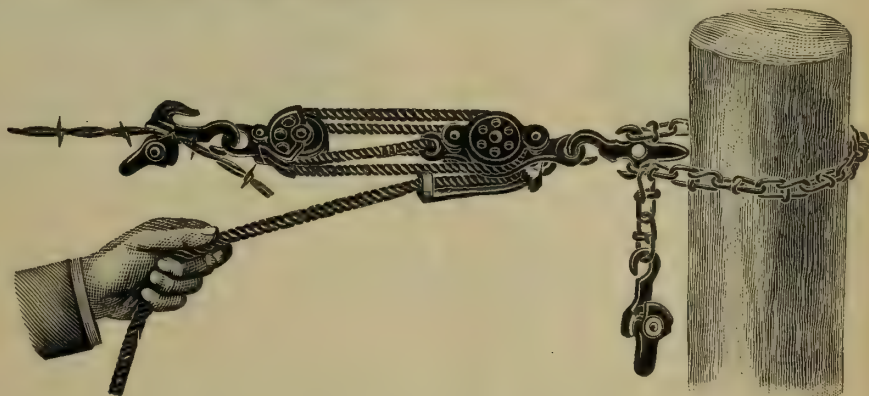
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None better on the mar-
ket unless it is the
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If your Jobber cannot
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NO. 233 —WILCOX TACKLE-BLOCK WIRE STRETCHER



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PERFORATED SHEET METALS in Brass, Copper, Steel etc.



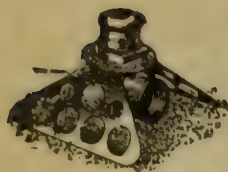
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WIRE MANUFACTURERS
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All sizes of perforation
and thickness of metals for

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Lawn Sprinkler**
IS YOUR
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Send for Folder No.14.
PULLMAN MFG. CO.
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ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and
ELECTRO PLATE.**

Ask for our Catalogue and Quotations.

NEWMAN'S PATENT INVINCIBLE FLOOR SPRINGS

Combine all the qualities desirable in a Door
Closer. They work silently and effectually, and
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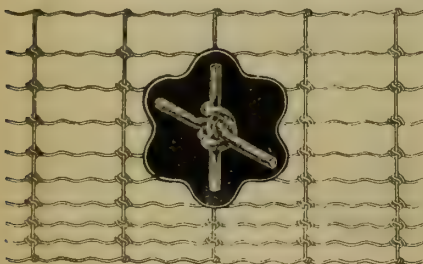
MADE SOLELY BY

W. NEWMAN & SONS, Birmingham.

There are hundreds of manufacturers
whom we can serve to their advantage. We
make Steel Dies, Stencils, Name Plates,
Rubber Stamps, Seals and similar lines.
We should be glad to have correspondence
from manufacturers and others on this
subject.

THE SUPERIOR MFG CO.

58 Adelaide St. W., - TORONTO.



IDEAL FENCING

Is made of all No. 9 hard steel wire. It will not bank snow
nor harbor weeds or vermin.

The strongest and longest lasting fence made.

Write for catalogue of fencing and gates.

The McGregor-Banwell Fence Co., Limited,
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Merrick, Anderson & Co., Winnipeg, Man.
Sole agents for Man. and N.W.T.

A FULL LINE OF

Wire Springs

FOR THE

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JAS. STEELE, Guelph, Ont.

A SAMPLE ORDER SOLICITED.



Steel Frame Support.

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"Maxwell Favorite Churn."

**PATENTED
FEATURES:**

Improved Steel
Stand, Roller

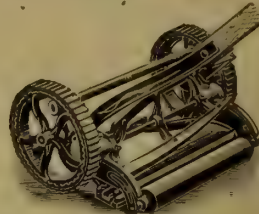
Bearings, and Foot and Hand Lever Drive, and Detachable Driving
Link. Improved for season of 1904. Steel or Wood Frame as desired.

Lawn Mowers.

High and Low Wheels, from 12 in. to
20 in. widths. Cold Rolled Steel
Shafting, Crucible Steel Knives and
Cutting Plate.

If your Wholesale House does not offer you these articles

SEND DIRECT TO US.



MAXWELL MOWER

8-in. Low Wheel.

Wheelbarrows.

In Four
Different
Sizes.

SPRINGS

FLAT—SPIRAL OR VOLUTE

INTERESTING CATALOG MAILED ON APPLICATION

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BRISTOL CONN.

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Factory equipped with the
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THOS. H. WYNN, - - HAMILTON

Sterling Silver

DRAM FLASKS

TEA SETS, TOILET SETS, ETC., ETC.

Direct from **Manufacturers**

No merchant's profit to pay.

Full line of samples.

Chas. Westwood & Sons,

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Board of Trade Bldg., Montreal, - Agent

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BEST MANILA
BRITISH MANILA
or
SISAL ROPE

be sure and insist upon the dealer supplying
our make.

Consumers Cordage
Co., Limited, Montreal

Then you will receive a satisfactory
article without any additional cost.

== NOW ==
IS THE TIME TO PLACE YOUR SORTING UP ORDERS
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POCKET
KNIVES

TRUE BRAND



CUTLERY

RAZORS

SCISSORS

BEST GOODS

QUALITY GUARANTEED

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., **Montreal**



Search America

and you can't find a better or as good a Washing Machine as The New Century which we make.

We can't prove it here. Our catalogue tells a good deal about it (free), but the proof of proofs is a thorough test of the machine itself. We have many letters from actual users which support our claims. You can sell it.

THE DOWSWELL MANUFACTURING CO., Limited, - HAMILTON, ONT.

Kemp's Nickel-Plated Copper Tea Kettles



"ROYAL" Pattern



"ONTARIO" Pattern

Double seamed
spout.

Handle rod in
one piece.

Well finished
throughout

WE SHIP PROMPTLY

KEMP MANUFACTURING CO., TORONTO, Canada

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To Own
Cut Book
Page 77
aaw

Protection Against Exposure Fires.

It is generally admitted that the principal defect in the modern buildings, as revealed at Baltimore, is weakness against attacks from fire without. It has been too freely assumed that if a building is so constructed that a fire starting at any point in the interior cannot spread, the main result has been accomplished. As a matter of fact nearly every large building has dangerous neighbors, and it has been shown more than once that the vulnerable part of the modern business building is to be found in the opening which permits fire to enter.

A most important protection for windows liable to exposure to external fire is a proper fire shutter. The standard fire shutter at the present time is made of wood covered with tin, such a construction being generally assumed to be better than a sheet-iron shutter. Mr. Freeman tells the story of the origin of this idea, it being due to the fact that about 25 years ago in a fire at the Pacific Mills at Lawrence, Mass., a tin-covered wooden shutter stood the fire while one of sheet iron warped and allowed the fire to pass around the edges. This case showed that the defect of the iron shutter was its liability to warp, but the reason for warping may be discovered, and in most instances removed, by proper construction. The cause of warping is found in unequal expansion or in the cramping of the shutter so that it cannot expand freely. Ribs, or other strengthening pieces attached to an iron shutter will cause it to warp under heat, and this construction is defective, while the provision of sufficient room for expansion of the whole shutter will avoid the tendency to buckle under heat. A plain steel shutter well secured and proportioned will be found to give good protection against fire from without, while for extra protection Mr. Freeman recommends two shutters, the outer one receiving the brunt of the heat and the inner one thus being able to stand out against the duration of almost any fire.

THE PATH OF SAFETY.

The path of safety from exposure fires for office buildings and the like lies in a window casing formed so that we can attach to it a shutter of a form similar to the ordinary inside house blind. Our

ordinary business buildings have walls thick enough so that by making the shutter in four folds or leaves, two being hinged together, and these two in turn attached to the wall, making each fold in the shutter only about 15 in. wide, the window will be wide enough for all practical purposes and we can fold the shutter back with the window jam very much as we do the inside blind.

To do that with the ordinary tin-clad shutter would be almost impossible because of the thickness of that form of shutter. It can be done with a steel plate shutter without ribs, and the radiation from the inside can be checked by some thin, incombustible porous covering like asbestos board. If in our underwriters' laboratories, in our technical schools, and in our tours of survey, we can direct attention to these views and urge the solution of the problem of how to make an efficient fire shutter, which shall only be $\frac{3}{4}$ in. or 1 in. in thickness, I believe that before long the problem of protecting an office building against exposure fires will be solved.

It is entirely possible to design a window opening adapted to receive a safe shutter so that it will be just as convenient for ordinary business purposes as the type now common. I think it probable that the best place for the shutters is inside the glass, sacrificing the glazed sash outside them in case of any great conflagration.

WATER CURTAINS.

We hear a good deal now-a-days about water curtains, and I would like to say just a word on that, because I think there is a great deal of misapprehension about their efficiency. I would like to say a word about wire glass also, because although in general excellent I think there is a great misapprehension about what wire glass can do.

I began experimenting with wire glass very soon after it first came out, and I have used it in numerous instances, and it is a most excellent material in its way, but it has its limitations; it has the same limitations that a water curtain has, and that is that it does not stop the passage of radiant heat.

You all have noticed how, when you are traveling in a railway train, perhaps 60 miles an hour, and they happen to be burning a pile of ties along the

track, that although your face is directed towards your newspaper you will feel the flash of heat passing through the car window and striking against your face as you go past that pile of burning ties. That simply illustrates the great ease and rapidity with which radiant heat passes through the glass.

Now radiant heat passes through glass with wire netting in it almost as easily as it does through any other glass, and the record made by wire glass in a certain building in Baltimore, which is pointed to with so much pride, is, I think, due to the fact that it was at a place where nothing combustible was immediately behind it. If you have a stock of dry goods or wooden ware or baled cotton or hemp just inside a wire glass window without shutters, and there is a hot fire across the street, these can probably be set on fire with much promptness by the radiant heat passing through the glass, and the subject should be thoroughly studied on a large scale in our underwriters' laboratories. For safety there must be something which will stop the radiant heat, and that can only be in the form of a shutter, and by virtue of stopping the heat the shutter will become hot.

The case with the water curtain is very much the same as with the glass. Water is diathermous, as physicists call it—that is, radiant heat passes through water very easily. We must, I believe, set down these stories that have been told about the efficiency of water curtains as being mainly fairy tales.

This supposed efficiency of the water curtain is another topic which I hope that some one of our underwriters' laboratories and some of our schools of applied science will take up and investigate with precision of measurement.

I have heard stories of the wonderful efficiency of the water curtain, but I must beg to disbelieve them largely on the theoretical ground as yet. It is a matter which can be tested very easily.

THE WINDOW SPRINKLER.

The window sprinkler came in for a good deal of praise in certain quarters in Baltimore. I took particular pains to investigate that because I wanted to find just how far they merited it, and I have no doubt they did some good, but they are not entitled to anything like

the glory that is claimed for them. In short, if you want to provide against an exposure fire I believe that the only satisfactory way to do it is:

First, by a wall either of brick or cement concrete.

Second, by properly designed window openings and window casings, and

Third, by good shutters in those windows.

In the absence of shutters automatic sprinklers, supplemented by heroic efforts with hose streams on the inside, may sometimes save the day with great expense for water damage, but where exposures are bad a good shutter on a proper window should be the first care of architect and owner.—Engineering News.

WINNIPEG MEMBERS ENTHUSIASTIC.

WITH the object of discovering the real opinions of Winnipeg retail hardware men as to the value of their association, the Winnipeg representative of Hardware and Metal interviewed a number of them at their places of business last week. It might be remarked in passing that he did not find most of them very approachable—not that they were discourteous, for that would be the direct opposite of the truth—but that in nearly every case he found them with more business than they could conveniently attend to. This year has been probably the most prosperous on record for the Winnipeg retail hardware men, as building operations have eclipsed all previous records. It is evident that business shows little signs of slackening, for the open Fall has permitted building to be continued with little interruption and, moreover, Winnipeg hardware men are doing a good Christmas trade.

But all this is apart from the main purpose of this story. When they could spare a few minutes from business the men interviewed were quite willing to bear testimony to the value of their association, and to tell how it had helped to make them prosperous. It was evidently the general opinion that, without their association, Winnipeg hardware men might have reaped little or no profit from the enormous expansion of the hardware trade in recent years. Their turnover would have been as large, but business would have been conducted at little or no profit. It was their conviction that their association is an unmixed benefit that influenced them in calling a meeting last August for the organization of a western association.

Among the large number of hardware men who were interviewed not one was found who did not thoroughly believe in the Winnipeg Association. The following expressions of opinion may be taken as representative:

OLIVER GILMER.

Oliver Gilmer, of Gilmer & Co., made it plain that he believed in the association. "Yes, I thoroughly believe in it," he said. "It has enabled us to do busi-

ness at a living profit, which we could not do before. We haven't raised prices to an unreasonable figure; our association would not have lasted if we did so. And we haven't fixed prices on very many lines, just on a few staples like nails, building paper, white lead, etc. But when we agree on a certain price we all stand by it, and we can trust each other."

Mr. Gilmer was in reminiscent mood. "Things were different a few years ago," he continued. "Why, a few years ago a farmer I know would come in here and wear out about two dollars worth of shoe leather looking for a 5c shave on a keg of nails. And he usually got his 5c and more, for we were all fighting each other for his benefit then. When he had got his nails at wholesale price he always went to a hotel and asked the boys to 'line up and have something.' He could afford to—he saved so much out of us fool hardware men. He has given up his old game now, for it doesn't work, and that's one reason why I believe in the association."

A. P. MACDONALD.

A. P. Macdonald, of Macdonald & Fleming, is also a firm believer in the association. "There is no doubt it has been a good thing for us all," he said. "We haven't attempted too much—we haven't arranged prices on anything but staples. But by getting our prices on staples we have been able to maintain prices on other lines. Formerly we were in the habit of quoting low on staples in order to get an order for building hardware. Perhaps we got the order and our opposition in another part of the town lost it. Next time they would quote low on locks or hinges to get an order, and all the rest of us would have to follow suit. There has been none of that since we formed our association."

WILLIAM A. TEMPLETON.

"What is your opinion of the local association?" was asked Mr. Templeton.

"We have had it now for several years and I for one would not be without it," was the reply. "Before the association was formed we hardware men in Winni-

peg did not know each other, and each was more or less afraid of his rival. We were cutting prices all the time, and the least rumor that so and so were selling nails at such and such a price was sufficient to make all the others follow suit. The association has stopped all that, and we know each other better. When we hear a rumor of price cutting we don't lose our heads, but wait until it has been investigated. It is a mistake in nearly every case, and there is no foundation for the report. A few years ago it would have been sufficient to start a general slash in prices.

"Then, again, people have to buy from the retail trade now. There are a few preferred accounts, but there are now very few who can buy at wholesale prices from Winnipeg houses."

C. W. GRAHAM.

C. W. Graham, of Graham & Rolston, told a similar story. "Our customers say it is a good device to 'rob the public' of their money," he remarked laughingly. "It certainly has enabled us to maintain prices on staples, and that makes it possible to get a reasonable profit on all lines. Undoubtedly the local organization has been a good thing, and I hope the western association will be a success."

A STAFF DINNER.

One of the most enjoyable events which has transpired in Montreal lately in hardware circles at least, was the celebration of the annual dinner of Lewis Bros. & Co.'s resident staff, on Saturday last. This was the third of its kind, and was a huge success, completely eclipsing all former years. From the time the company seated themselves at the banquet table until the singing of "Auld Lang Syne," the entire proceedings were brimming with merriment and liveliness. With respect to the speakers who responded to the different toasts it can well be said that they acquitted themselves in a manner that was entirely to their credit.

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited.
HAMILTON, ONT.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues or booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

THE Metallic Roofing Co., of Canada, Limited, Toronto, have issued an exceptionally fine catalogue descriptive of sheet metal building materials. This is probably the finest catalogue ever issued by a manufacturer of this class of goods. The catalogue is 12x9x1 1-2 inches, and is handsomely bound in cloth with silver designs. There are 439 pages.

It would be impossible to even attempt to run over the contents of this volume since everything in the sheet metal building materials line is illustrated and described. The descriptions are clear and comprehensive. Not only are the materials themselves described and illustrated, but in many cases an illustration is given of some building in the construction of which this special material is used. Thus accompanying the description of the "Hayes" Patent Steel Lathing, full page illustrations are given of the following buildings in which the "Hayes" lath was used: City Hall, Toronto; University of Toronto; Toronto University Library; St. Michael's Hospital, Toronto; Parliament Buildings, Ottawa; Union Station, Toronto; Head Office of Dominion Bank and Confederation Life Building, Toronto.

The typographical work is high-class and attractive. On the whole the production is something for the Metallic Roofing Co. to be proud of.

The "Loew" Separator.

The Loew Supply and Mfg. Co., Cleveland, Ohio, have issued a handsome and very interesting little catalogue on their "Loew" grease and oil separator. This separator is quite different from the ordinary baffle plate separator, in that instead of presenting a cast iron plate for the on-rushing steam to strike against and thus deposit the particles of oil, the separator consists of several fibrous surfaces onto which the steam is directed. The oil and grease is absorbed by these surfaces, collected and drained to discharge pipes. A cross section of the separator is given, and on the opposite page a full description of the action.

Oil Burners and Steam Traps.

The National Oil Burner and Equipment Co., St. Louis, have issued a neat catalogue, No. 4, descriptive of their oil

The Road to Success.

The road to success in paint selling must be paved with *good quality*, with *good advertising* for the curbing.



THE
SHERWIN-WILLIAMS
PAINT
(S. W. P.) Prepared



is *best quality* paint. It makes friends for the merchant—puts money in his pocket—increases his reputation. It takes the most push as well as the best paint to do the biggest paint business. You not only get the *quality* in S. W. P. but with it you get the *push*—the advertising.

If you want to know what paint selling success really is—if you want to put new life and new energy into your *entire business*, write today for our 1905 Agency proposition. It will show you the *Road to Success* through your paint department.



THE SHERWIN-WILLIAMS Co.

PAINT AND VARNISH MAKERS

Canadian Headquarters and Plant: 639 Centre St., Montreal.
Warehouses. 86 York St., Toronto; 147 Bannatyne St., East, Winnipeg, Man.

burners and equipment, and also their steam traps. In the catalogue is described their system of feeding fuel oil to boilers and furnaces, special stress being placed on the burners. Directions are given for the setting up and operating burners for boilers, furnaces, etc., and also for welding, heating, etc. Directions are also given for the operation of domestic burners for house heating, cooking and auxiliary boilers. A full description is given of their branch steam trap, the chief feature of which is the system of double levers to allow the discharge of condensation. The levers are operated by means of floats.

Scottdale Engines.

A handsome catalogue has been issued by the Scottdale Foundry and Machine Co., successors to Kenney & Co., Scottdale, Pa. This firm manufacture Corliss engines, hoisting and haulage engines,

coal tipple outfits and coke oven machinery. The catalogue is devoted to their Corliss engines, the different parts of which are illustrated and described. This company have recognised the growing field of the Corliss engine and have added this style of engine to their output. The main distinguishing features of their Corliss engines are: The arrangement of the steam chest and cylinder on the base and the placing of the dashpots below the base plate of the cylinder to allow proper lubrication of the vacuum cylinder.

Little Giant Feed Water Heater.

Brancher Bros., Danville, Ill., have issued a little booklet describing the Little Giant Phenomenal Feed Water Heater and Purifier. This heater is patented, Brancher Bros. being the inventors and patentees. The purifier consists of a heating and purifying

chamber attached directly to the top shell of the boiler, by which the live steam under full boiler pressure comes in direct contact with the feed water as it enters the heating chamber. In the chamber are distributing pans down and over which the water flows, the impurities settling in the pans, while the purified water enters the boiler around a skimming basin. It is claimed that the tendency for the boiler pressure to be lowered by the rapid condensation of the steam is counteracted by the more rapid evaporation of the water in the boiler in consequence of the high degree of heating of the feed water.

This is an interesting catalogue.

Handsome Calendar.

One of the most attractive calendars yet to hand is that of the Harrington & Richardson Arms Co., Worcester, Mass. The lithograph represents a young lady in military costume, seated with her dog beside her and shot gun across her knees. While the supply lasts readers of Hardware and Metal will receive one of these by addressing the above company and mentioning this paper.

NEW USE FOR GOLD AND SILVER.

It is reported from Paris that Dr. Albert Robin has discovered that gold and silver, when finally subdivided and employed in infinitesimal doses, exercises considerable effect on vital phenomena. The reduction of metal to the desired state is obtained by their electrical dissolution in water. Metal so treated acquires the property of developing force similar to that of fermentation.

This peculiarity of the phenomena has led Dr. Robin to use the term "metallic ferments" in reporting his discovery. His metallic ferments, when employed in cases of pneumonia in hypodermic injections of from five to ten cubic centimetres of solution containing from nine-hundredths to two-tenths of a milligramme of gold, silver, platinum, etc., produced brusque defervescence of the malady in six cases out of ten before the seventh day. Thirteen cures were obtained in fourteen cases thus treated.

The employment of these metallic ferments does not constitute the complete treatment of pneumonia, for complications and the predominance of certain symptoms necessitate accessory therapeutics, but great progress would appear to be made by their use in the treatment of this frequent and serious malady.

IVER JOHNSON REVOLVER GRIP



Combines features of *Simplicity, Utility and Practicability.*

An invention that has met with spontaneous favor.

Its value is immediately recognized by all Revolver users.

Invaluable for accuracy.

Indispensable in preventing weapon from being knocked or wrenched from the hands.

Is detachable and can be readily removed.

Is held firmly in position by three small screws, making it as solid as if a part of the frame itself.

Not sold separately or detached. Obtainable only on

IVER JOHNSON Automatic and I. J. 1900 Double Action Revolvers.

Send for literature giving complete description.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS., U.S.A.

Technical Book Reviews

Readers of *HARDWARE AND METAL* can secure any of the books referred to below at publishers' prices by writing to Book Department, *HARDWARE AND METAL*, Toronto.

Automobiles—A practical treatise on self-propelled vehicles with illustrations and diagrams, by Jas. E. Homans, A.M.; bound in black vellum, gilt titles; published by Theo. Audel & Co., New York. \$2.

This is a new edition, revised to meet the increasing demand for a thorough, up-to-date treatise on automobiles, their construction and operation. In the first chapters the general principles of automobile construction and operation are taken up, and steering devices, underframes, wheels, tires, bearings, and lubricators are considered in detail. These chapters are followed by chapters on the theory, construction and operation of gas engines. Several types of engines are discussed separately. The methods of ignition are described very

clearly and fundamentally, while governing devices are given special attention.

The long and comprehensive chapter devoted to the description of leading types of gasoline vehicles, including the most important of American build, is of great interest and value.

The second portion of the work is devoted to the description of electrical vehicles, and this part is as complete as the gasoline vehicle part. The fundamental principles of electricity and electrical measurements are considered in the beginning, and then general dynamo and motor construction is touched on. The consideration of electrical carriage motors occupies considerable space and is of special interest. The storage battery, the source of power in the electrical vehicle, is discussed in detail.

The last portion of the book is devoted to steam vehicles, the fundamental principles of steam as a motive power being considered. Boilers as well as the engines are discussed.

There is a lot of information contained in the 644 pages of the volume.

H. S. HOWLAND, SONS & CO.

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only

HARDWARE MERCHANTS

Only
Wholesale

138-140 WEST FRONT STREET, TORONTO

We are now occupying a portion of our new warehouse, and are able to fill all our orders promptly.

SKATES**SPRING SKATES**

No.	Size
5 Boker's Polished	7 to 12
9 Boker's Plated	9 to 12
90 Starr Mfg. Bright Finish	7 to 12
95 Starr Mfg. Plated	7½ to 12

BOKER'S LADIES' SKATES

No.	Size
415 "Crescent" Ordinary Quality...	8½ to 10½
1422 "Charm" Best Quality, Plated..	8 to 11½
1424 "Daisy" Concave Runners, Plated	9 to 11½
447 "Pride" Light Runners, Plated..	9 to 10½

BOKER'S HOCKEY SKATES

No.	Size
530½ "Hockey" Ordinary Quality....	7½ to 11
515 "Hockey" Ordinary Quality, Plated.....	8 to 11½
1535 "Gem" Full Finished, Plated..	8 to 12
531 "Royal" Best Quality, Blued Tops.....	8½ to 11½
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Double Ender**

No.	Size
4597 "Stadacena" Ex. Quality, Plated	10½ to 12

**BOKER'S HOCKEY SKATES
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No.	Size
631 "Perfect" Best Quality, Blued Tops	9 to 12
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3692S "Swift Hockey" Best Quality..	10 to 11½
Tempered Steel Runners. Full Plated.	



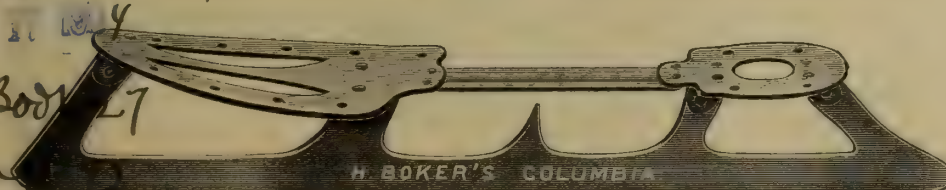
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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Dec. 15, 1904.

DEALERS in these supplies expect a considerable falling off in trade at this time of year. This is the season reserved for stocktaking, as it is generally the slackest, but business has kept up to a wonderful extent, and merchants are finding it difficult to fol-

low their usual custom in view of the volume of business. An unusual number of inquiries are reported, but prices remain unchanged.

Range Boilers—There has been a big season's business done in range boilers, and not a few orders are still being placed. We quote as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—It was expected that an advance would take place in lead pipe, but now the market is somewhat easier and no such advance is expected. The demand continues good. Discount 30 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—Little activity exists in this line, with no change in prices. Quotations are: Soil pipe, standard, 50 per cent. and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—The demand continues good, in fact it is unusually large for this season. Discounts on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—It is fully expected that a sharp advance will take place in iron pipes in the near future. The market is firm and strongly upward, with very active demand. Our quotations are: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto Dec. 16, 1904.

AERICAN manufacturers of galvanized iron range boilers have withdrawn their prices. The Canadian merchants, thinking that they were going to advance the price as a result of the firm condition of galvanized iron, have set their own price which is an advance of from 25c to \$5. A better demand has sprung up for soil pipe. Lead pipe is firmer and as pig lead has been advancing, the outlook is for an advance in the pipe. Trade is quieter this week. Country orders have almost ceased and the orders received this week are local. Owing to the strong demand for iron pipe the jobbers have been unable to secure large enough quantities to fill orders, but the general quietness of this week has enabled the wholesale jobbers to close up on their orders.

Lead Pipe—Trade is brisk. Demand has increased, and prices continue unchanged. We quote: Lead, 7c; lead waste pipe, 8c; discount 30 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—A strong demand is current. Prices are firm and unchanged. We quote nominally: Malleable fittings 20 per cent. for American and 35 per cent. for Canadian; cast iron (standard), bushings, 65 per cent.; headers, 60 per cent.; flanged unions, lipped, 60 per cent.; malleable bushings, 57 1-2 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—A quiet demand continues with the discount unchanged at 15 per cent.

Galvanized Iron Range Boilers—Trade is brisk. Owing to the firm price of galvanized iron manufactured goods have advanced. Our quotations are: 12 gallon capacity, standard, \$4.50; extra heavy, \$6.50; 18 gallon, standard, \$4.75; extra heavy, \$6.75; 24 gallons, standard, \$4.75; extra heavy, \$6.75; 30 gallons, standard, \$5; extra heavy, \$7.50; 35 gallons, standard, \$6; extra heavy, \$8.50; 40 gallons, standard, \$7; extra heavy, \$9.50; 52 gallons, standard, \$11; extra heavy, \$14; 66 gallons, standard, \$18; extra heavy, \$20; 82 gallons, standard, \$21; extra heavy, \$24; 100 gallons, standard, \$29; extra heavy, \$34; 120 gallons, standard, \$34; extra heavy, \$40; 144 gallons, standard, \$47; extra heavy, \$55.

Iron Pipe—Trade continues brisk. The market is steady. Our quotations are: Black, 1-4 inch, \$2.04; 3-8 inch, \$2.06; 1-2 inch, \$2.30; 3-4 inch, \$2.88; 1 inch,

\$4.13; 11-4 inch, \$5.63; 11-2 inch, \$6.75; 2 inch, \$9. Galvanized, 1-4 inch, \$2.86; 3-8 inch, \$2.89; 1-2 inch, \$3.15; 3-4 inch, \$4.03; 1 inch, \$5.78; 11-4 inch, \$7.88; 11-2 inch, \$9.45; 2 inch, \$12.60.

Solder—Market strong and prices firm. We quote: Bar solder half and half, guaranteed, is quoted at 173-4c; wiping solder at 151-2c, and refined 161-4c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 51-2 feet, 21-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 21-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D, A quality, \$5.40; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

A Sewage Peril.

WITH the multiplication of municipal and private water works systems in small towns and villages, without adequate provision for sewage and drainage, a menace to health is introduced which, in some places, has already become alarming and is steadily growing worse, says the Metal Worker editorially. The gravity of the situation is enhanced by lack of effort to correct a vicious practice, and, perhaps, too, by what appears to be ignorance of the consequences. The general use of open wells makes it probable that in a town, village or quickly settled neighborhood one underground stream or source of supply feeds more than one well or pump. Experience proves that all the houses of a town or community do not subscribe for water when the opportunity is afforded. Some are too poor; some are renters with a stingy landlord, while others prefer the water supply upon which they have previously depended. In every case where water is taken and fixtures are installed within the house, the question of what to do with drainage and sewage comes up, when there are no sewers in the roadways. It is undoubtedly the case that the answer in some instances has been, "Turn it into the well; we don't need the well now." Pollution of neighboring wells follows, opening the door to all the consequent evils. Cesspools, or "dry wells," with their cones of filtration often encompassing the water supply of neighbors, are bad enough, but the use of open water wells as drainage or sewage receptacles should be absolutely prohibited. Where tubular wells are the source of supply for a waterworks, the use of wells for cesspools may possibly contaminate the whole source of supply to a community, both public and private.

When the securing of a good job hinges entirely upon the cost and convenience of disposing of the sewage, it is a temptation to the plumber to suggest the disused well, but it would be well not to yield to it, even if the house owner should suggest the well to the plumber. If this practice was uniformly discountenanced by the trade no citizen would have much chance to infringe his neighbor's rights as to choice of water supply. If the advent of waterworks is to be the indirect cause of sickness and disease, fed by hidden causes, often not discovered until it is too late, the advantage secured is inevitably gained at the expense of misfortune. Municipal authorities should determine by law in what way sewage and drainage may be disposed of. When waterworks are proposed, the first question should be not the source of supply, size or cost of the work, but how to dispose of the sewage and drainage. If no satisfactory solution is arrived at beforehand, none is likely to present itself afterward, and

[The next issue of Hardware and Metal will be the regular monthly Plumbing Number. Every plumber in the Dominion should receive a copy. It will as usual be full of interesting matter for those engaged in the plumbing trade.]

in such case the idea of having waterworks should be abandoned. It is well to remember that it is not the business of the company applying for the privilege of building a waterworks to bring up the matter of disposal of waste, but, if confronted with this problem, they are usually apt to find a quick and too easy solution. It would be well for plumbers and all interested in sanitary questions, directly or indirectly—and every good citizen should be so interested—to familiarize himself with his subject, which is becoming a very serious question and one that affects the well-being of many communities throughout the country.

Giving Life to Plumbers' Solder.

A VALUABLE kink known to but few plumbers and highly treasured by those who do know is given by William Kirkwood of Chicago. When solder becomes poor, either as the result of overheating or because of deterioration and oxidization, add a tiny piece of phosphoric tin about the size of a pea. This is sufficient for the ordin-

ary potful of solder. Phosphoric tin can be bought at about 50c a pound at any tin or lead works, and a pound will be sufficient to supply the ordinary user of solder for a year to five years. When solder becomes poor it is usually because of the presence of protoxide of tin or lead, due to the gradual oxidization of the metal. When this takes place the lead constituent of the solder becomes granular and the tin watery, and the solder acts like sand and water, being worthless. The phosphoric tin causes a union of the phosphorus contained in the tin with the oxygen of the oxide, freeing the mixture at once from the troublesome oxide and making it as "lively" as ever.

Economic Modern Heating.

AT the present time property owners of all classes are more and more becoming interested in forms of apparatus for steam and water warming which burn hard and soft coal or coke, and which extract and utilize such a large measure of the heat value of coal that the demand for such apparatus is rapidly increasing, remarks a writer in the Chicago Chronicle. These forms of heaters not only produce very sharp and effective combustion but in connection with various forms of heating radiators they thoroughly distribute the warmth to all parts of the building. Measured by the uniform and reliable results they produce they are unquestionably the most economical appliances now in use.

It is a noteworthy fact that while even a decade or so ago steam and hot water heating was considered a rich man's luxury, to be afforded only by the favored few, to-day these methods are being introduced by the thousands into the more modest cottage homes of our country. A very large majority of property owners (especially in urban districts) in building consider the merits of these modern sanitary means of comfort, healthfulness and home cheer and an increasing number purchase every year. With good judgment many conclude that it is the part of wisdom to reduce expenditures for things which are less consequential and put their money into good reliable heating apparatus.

It is also noticeable that landlords who formerly rented their hotels, apartments and other leased properties subject to the fire risks, dirt, damage and discomforts of stoves and other cheap forms of heating apparatus are increasingly demonstrating the better judgment of equipping their buildings with steam

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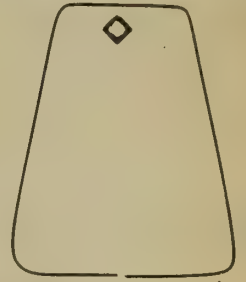


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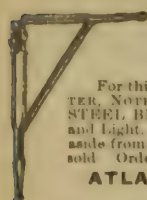
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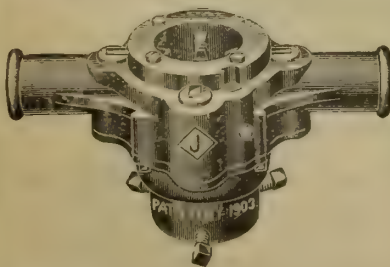


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and water heating outfits, which eliminate the risk, dirt and damage, and increase the rental returns.

In fact, the investment feature attending the purchase of the highly improved modern cast iron steam and hot water heating apparatus is a matter of prime importance. Buildings so equipped become permanently more valuable to live in, to rent or to sell. While cheaper forms of heating apparatus by average will endure possibly ten years and then go on the scrap heap, a good cast iron steam or water boiler and the radiators used therewith will last as long as the building—are practically indestructible by use. So an investment in steam or water apparatus is not an expense item, but means an addition to permanent property value.

Building Permits.

TORONTO.

Mrs. C. L. Kirk, dwelling, No. 64 Marion street, \$1,200.

Chas. B. Bulley, dwelling, No. 18 Withrow avenue, \$3,000.

Jas. Strachan, dwelling, No. 89 Roxborough street east, \$4,500.

A. Falconer, dwelling, Preston avenue, near Hallam street, \$1,000.

L. Croker, dwellings, Nos. 349 and 351 Ossington avenue, \$4,000.

W. H. Hutchinson, dwelling, No. 3 Castle Frank Crescent, \$4,000.

F. Phillips, dwelling, Montrose avenue, near College street, \$1,500.

A. B. Coleman, dwellings, Brock avenue, near Moutray street, \$13,000.

Jas. M. Sinclair, warehouse, Nos. 114 to 120 Adelaide street west, \$3,000.

King Bros., dwellings, Rusholme road, near Hepbourne street, \$8,000.

Wm. J. Walsh, dwellings, corner of Wyatt avenue and River street, \$3,400.

J. C. Reid, dwelling, McKenzie avenue, near Castle Frank avenue, \$4,200.

Sovereign Bank, alterations to building at No. 168 King street east, \$1,000.

Waters & Elliott, dwellings, Palmerston avenue, near Vermont avenue, \$3,500.

M. B. Vandevoort, dwelling, corner of Logan avenue and Natalie street, \$1,600.

H. H. Suydam, dwelling, Chestnut Park road, near Roxborough avenue, \$6,500.

R. Jessman, dwellings, corner of Markham street and Wolseley street, \$4,000.

W. E. Watson & Co., dwellings, corner of Walmer road and Dupont street, \$18,000.

Mrs. M. Crosier and Mr. Nightingale, dwellings, Muir avenue, near Sheridan avenue, \$2,400.

Building Notes.

A new school house costing \$5,000 will be erected at Headingly, Man.

Nordin Bros. are erecting a large sawmill at Miramichi, N.B.

Tenders have been invited for the erection of a new postoffice at Hawkesbury, Ont.

A new bridge is to be built at Byron, Ont., which is to cost in the neighborhood of \$16,020.

Work has begun on the erection of the new gas plant by the Winnipeg Electric Railway Co., at Winnipeg.

In all probability another bridge will be built across the Red River, from North Winnipeg to Kildonan East.

T. W. Kirkwood, Toronto, has completed the erection of the new iron and steel rolling mills at Belleville, Ont.

The Great Western Development Co., of Winnipeg, are having land surveyed for the purpose of erecting warehouses.

J. D. McNab, township clerk at White Lake, Ont., has called for tenders for building a bridge across the Madawaska River.

Arrangements are being made for building a Normal School building at Vancouver. The building when completed will cost from \$20,000 to \$25,000.

M. Marchand, an architect of Montreal, is preparing plans for the erection of a new cathedral at St. Boniface, Man., costing in the neighborhood of \$150,000.

G. Crowe & Son have received the contract for the erection of a new boiler house, engine house, shaving house and smokestack, at the Gilmour Door Factory at Marmora, Ont.

BOSTON, NOT WALTHAM.

In a reference in the last number of Hardware and Metal to the formation of the new firm of the George W. Bowers Mfg. Co., it was inferred that the headquarters of the firm were in Waltham, Mass. The head office is, however, at Boston.

STREET RAILWAY ASSOCIATION TO BE FORMED.

It was decided by representatives of various companies to hold an organization meeting for the purpose of starting a Street Railway Association in Canada. The meeting was held at the Montreal Street Railway Offices, and it was decided to hold the organization meeting on Dec. 20, when all the street railway companies in Canada will be invited to send representatives. Prior to this the Canadian companies were represented in the Street Railway Association of the United States, and the new movement ought to meet with favor among the street railway people of Canada.

Window and Interior Displays

Timely Hints
and Suggestions

FROSTED WINDOWS.

IN all parts of Canada and the Northern States the window dresser has a foe to fight, which may deprive fully one-half of his displays during the three Winter months of their value. Without precautions, he need not be surprised at this proportion of useless arrangements, but it is a curious fact that some stores are almost free from frosted windows, even though no preventives are used.

The cause of the frost is the collection of moisture on the inside of the glass brought about by the contact of the warm air of the interior on the glass kept very cold by the atmosphere outside. The simplest plan, then, seems to be to prevent the warm air reaching the glass. This is easily done in such stores as those handling dry goods, boots and shoes, hardware, etc., which do not display goods injured by a low temperature, by enclosing the window space.

The Enclosed Window.

After the window is enclosed in the back, the air must be allowed in some way to circulate inside, or the frost will gather as surely as before. Above the glass, in the sash, bore small holes about half an inch in diameter and six inches apart. In the window floor, and as close as possible to the glass, bore more holes, and from these have tin pipes connecting them with a cold air box in the centre under the floor. This box is open to the outside air through a slit under the casing of the window. The cold air enters the box and is carried through the pipes to the interior of the window, and up the glass to the overhead holes, making a draft that keeps the inside of the glass at the same temperature as the outside, dries any moisture, and so cools the window space that there is little probability of the formation of moisture.

As more or less dust will enter holes opening directly into the window, the cold air box is used. A further preventive is to have a small slide door on the outside over the slit, which can be closed when dust is blowing, or to place a door in the cold air box itself which can be closed from under the window on the inside.

To make this plan of any avail care must be taken that the doors of the windows are kept constantly closed. The window dresser will thus have to do his work in the cold window.

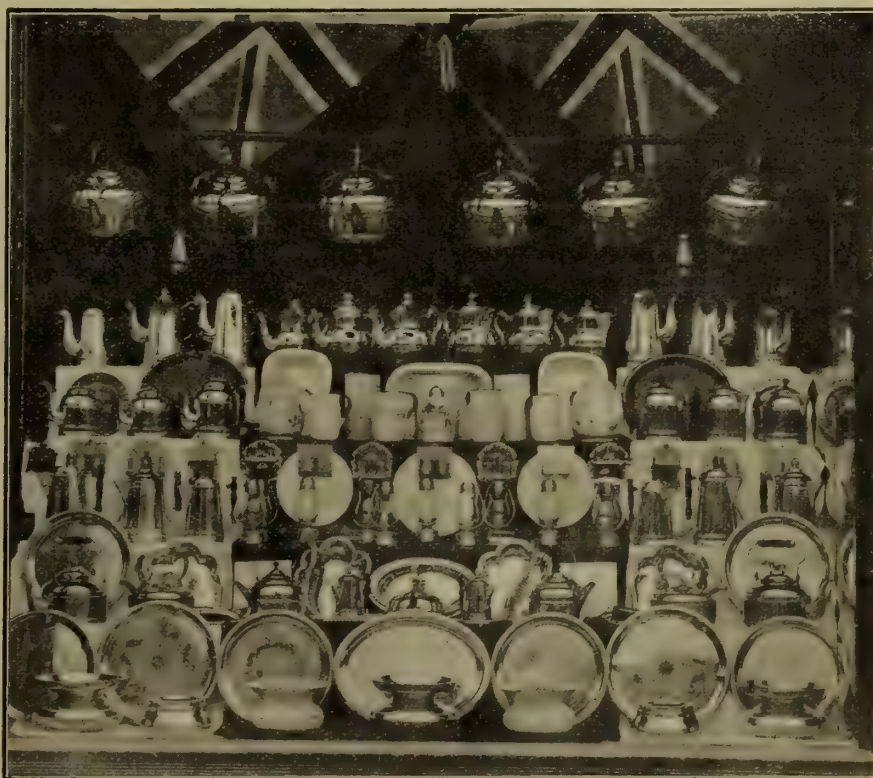
The backing which encloses the window is often no aid to the appearance, and for this reason it is built so that it can be removed in the warmer weather, leaving only a medium height background of good finish. If allowed to remain, it, however, keeps out the flies—a great consideration in any store.

Other Preventives.

Where the window is not enclosed, there are several plans open to the window dresser, each possessing more or less value. Some prevent the formation of frost by a super-heated atmosphere next the glass on the inside. To secure this coils of pipe running around the base of the glass are heated from the furnace. A coil of gas pipe with small outlets thickly scattered over it is sometimes seen. But these are only local in their effect and are not of neat appearance.

has been used with some success is: Equal parts of water and glycerine, with a few drops of cumarin (which must be dissolved in warm water) added. Rub the glass with this and the frost will not gather for some time.

These liquids are of temporary value only, and may not affect the frost which has gathered, but in every case will delay its re-formation after it has been removed in some way. The spirit lamp will do this but a far simpler method is to rub salt water over the glass, allowing the liquid to run into a cloth rest-



A display of household goods arranged by A. M. Cameron for McLennan & Co., Lindsay, Ont.

Apart from these, there are liquids which have considerable merit, especially when the temperature is not very low. Some of these are sulphuric acid, glycerine, aqua ammonia, hydrochloric acid, alcohol, nitric acid, cabalb nitrate or benzine. Sulphuric acid and glycerine are two of the best, the former working quickly, while the latter is a good preventive, although it leaves a somewhat greasy glass. The effect of aqua ammonia is of short duration, unless the moisture is thoroughly dried off the glass after it has melted the frost. This is sometimes done by running a spirit flame over the glass, a scheme in itself for melting the frost. A preparation that

ing on the floor at the bottom. When the frost is thus removed and the glass wiped dry, the liquid mentioned before can be applied.

The Electric Fan.

A plan which is coming more and more into favor is the use of the electric fan. This fan, which is also employed in the Summer time to keep the window free of flies, is placed three or four feet from the glass and directs a constant current of air against it at an angle. It dries up the moisture, only in very cold weather it will not keep the entire glass clear. It is simple, however, and as a rule satisfactory.

ELECTRICAL GOODS AND SUPPLIES

Free Lamps.

THE Electrical Age in a recent issue brings to a close a very long discussion on this point, and in that connection makes three proposals, which are, the periodical renewal of consumers' lamps free or on easy terms; the periodical inspection of consumers' lamps, and the free testing of, and reporting on, consumers' lamps. In the discussion it is said that over 100 station engineers, lamp makers and others have recorded their views, and there is a striking unanimity of opinion that the day for leaving the consumer and his lamps severely alone has gone by, and that the organization of an intelligence department is essential. The discussion dealt mainly with the question whether the supervision and supply of lamps should be undertaken by the supply engineer or the contractor. Several correspondents have objected to municipal trading and do not care to take the sale of lamps out of the private trader's hand. To these Wilmshurst replies that the present unsatisfactory position is the result of leaving the field in the hands of private enterprise. If the private trader had made the larger question of the supervision of the consumer's installation his business instead of simply the sale of lamps of unknown efficiency, the present state of affairs would not have arisen. The question of free lamps was thrown out as a tentative suggestion only; the discussion shows that in the opinion of the majority the time is not ripe for the adoption of such a scheme. The free testing of lamps meets with no opposition and Wilmshurst is convinced that in conjunction with diligent and judicious advertisement, and by circularizing one's consumers pointing out the difference in economy between say, a 31-2 and a 41-2 watt lamp, the utility of a testing department will be abundantly justified. Snell will shortly put into force a scheme for the up-keep of both ordinary and Nernst lamps. Boydon suggests to use lower voltage lamps in series and overrun them, say, three 70-volt lamps on a 220-volt network, but Wilmshurst fears difficulties in practice. To do this would necessitate

lamps being wired in groups of three, and when single lights were required the full voltage would have to be used. Lamps of two voltages would be required. Shawfield suggests that the municipality should purchase lamps at wholesale prices and retail to local contractors at such a price as to leave the latter a fair profit. Editorially the following remarks are made: "Mr. Wilmshurst indicates his conviction that the inspection and testing of lamps if it comes at all will come to stay. He cites the analogy of the gas companies, who are beginning now in their old age to educate their customers, and he speaks of the day having gone by for leaving the customer and his lamps severely alone. It seems that if at any time the consumer required to be educated in the choice and management of his lamps, particularly in the economy of smashing them, it would be when he first began to use the electric light, and that when it becomes the usual thing he will know all he wants to know about 'lamp efficiencies' just as he is accustomed to acquaint himself with any other detail of domestic economy. At present he is in the schoolboy stage, and must have knowledge thrust upon him. Certainly his education should not be left to the private trader, or lamp contractor, who has no special inducement to undertake it. On the objections to the sale of lamps by the supply department, Mr. Wilmshurst touches very lightly. The suggestion of a municipal showroom of electrical apparatus is a good one, if only the public can be induced to frequent the exhibition."

Edison Medal.

Designs for an Edison medal, commemorating the invention of the incandescent lamp, have been submitted. A meeting of the jury under the auspices of the National Sculptors Society, was held in New York recently, and after examining twenty-nine designs submitted in competition, awarded the first prize of \$1,000 for the successful design. It was awarded to J. E. Fraser. Prizes of \$100 and of \$50 were also awarded to the second and third compe-

titors. The designs will all be exhibited at the annual exhibition of the National Sculptors Society, where they will no doubt arouse much interest.

Adjustable Lamp Hangers.

A new design in the shape of an automatic cord adjuster, called the "Innovate," has recently been placed on the market, and no springs or weights are used. The inventor has contrived means of producing and employing friction, which retains automatically, and at the desired height, anything from the smallest bulb to the heaviest lamp fixtures and shades. It is made in two styles, both of which are practicable, and perfect in construction, operation and durability. This new device will no doubt meet with a successful reception, as it can be quickly attached and cannot get out of order, does not wear the insulation, and occupies no very great space.

The Electric Maintenance and Supply Co

The above is the name of a company recently organized in Montreal for the purpose of maintaining electrical machinery for different consumers of electrical power. The capital is \$20,000 and the officers are as follows: President, Thomas Sonne; Vice-President, J. Barker Vosburg, L.D.S.; Directors, M. A. Sammett, B.S.E.E.; S. W. Smith, and Alexander Sammett.

The company proposes to assume for a nominal yearly charge, all responsibility in connection with the good operation of electrical machines, and making such repairs as result from the wear and tear of the apparatus. They are employing expert electrical engineers who keep the machinery operated and thus remove all anxiety on the part of the heads of the industries, as to the probable expense in connection with a breakdown that is likely to occur at any moment. This should prove quite useful to many firms who have motors installed and who have no regular electrician in their employ. It is a sort of insurance against a break-down, and necessary expense and worry connected therewith.

WEEKLY RECORD OF PATENTS.

Below appears a complete up-to-date record of patents recently granted to Canadian inventors, in Canada and United States, furnished by Fetherstonhaugh & Co., patent barristers, solicitors, etc., head office, Bank of Commerce Building, Toronto:

Canadian Patents—A. J. Gabel, collar buttons; F. F. Wade, lock braces, lens mounts; I. M. Donaldson and E. A. LeSueur, safety discharge devices for gas tanks; J. Savage, floor lamps; J. J. O'Donnell, trolley pole controller; C. F. Ramsay, collapsible boxes; J. Welford and J. A. Welford, brooms; J. H. McLean, saw teeth; D. Marshall, tomato peeling machines; T. C. Stewart, hot air furnaces; I. J. Marsh, reel ovens; A. McNally and A. H. Plummer, clamping locks for mold boxes; H. Cutteridge and J. H. McConnell, machines for forming building blocks; E. Cutteridge, holds for manufacture of cement blocks and artificial stone; E. H. King, appliance or attachment to hay mowers; T. Hiddis, B. C. barges, designed for carrying ore or coal, etc., in bulk; P. Largis, the art of moulding; J. Lund, moulding machines; R. H. O. G. insulation conduits; E. Gagne, trolley guards; J. Heard, posts; A. Tetrault, threadles; I. Laurin, hydrants; S. H. Summerscales, cattle guards.

U. S. Patents—Wm. Angus, drier; Joseph Filion, car vestibule door trap; R. Guentle, convertible trunk; Adolphe D. Leblanc, chuck; Walter Leek, radiator; Robt. Ilvaine, trolley hanger; Elzear Michaud, bed; Mathew Misener, steam cooking device; Ed. M. Morgan, beater for eggs, cream, etc.; Francis Paul, Jr., carbureter; Francis Paul, Jr., air-forcing mechanism; Chas. Sullivan, P. J. Sweeney, and E. J. Woodison, ventilator attachment for water closet bowls; Ed. F. Wilson, fruit harvester.

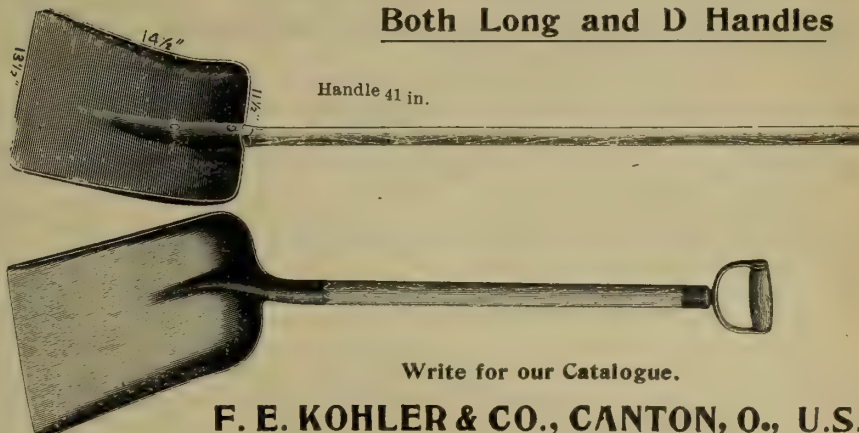
TRADE NOTES.

Joseph Moses is commencing a retail hardware business on Dundas street Toronto.

H. S. Howland, Sons & Co., Limited, Toronto, are having a large demand for their "Star" steel sleds and coasters. These sleds and coasters are all steel except the top, which is wood.

Lemon, Claxton & Lawrenson, tin-smiths, Kingston, are dissolving partnership; M. H. Claxton retires.

O' Connor, O'Callaghan & Co., hardware and plumbing merchants, Ottawa, have changed the name of their firm to O'Callaghan & Wilson.

SNOW SHOVELS, FURNACE SCOOPS**Both Long and D Handles**

Write for our Catalogue.

F. E. KOHLER & CO., CANTON, O., U.S.A.**FOR BRITAIN'S MARKETS**

I have unequalled facilities for selling Canadian manufactured goods in Great Britain and Ireland, and would like to hear from Manufacturers of General Hardware, Woodenware, etc., who seek direct "Representation" in its fullest interpretation. Have had 20 years experience amongst the Best British Buyers, and have a business connection which is unequalled. I know exactly their requirements and can satisfy any firm as to my Standing, Abilities, Business Methods and selling organization.

Will be in Canada during January and February next. In the meantime shall be glad to answer enquiries and make appointments in advance. Address in first instance:

WALTER P. NOTCUTT, c/o "Hardware and Metal," Toronto or Montreal.

See the incline in the core of the

ECONOMICAL HOT WATER BOILER

It facilitates the rapid and easy flow of the water.

The water heats quicker in our boiler. It deserves its name—"Economical"

Agents Wanted. Send for Catalogue.

P. GIES, Founder, BERLIN, ONT.**"Why Use Candles on Your Christmas Tree**

and run the risk of fire, which often occurs?"

With electric lights there is no danger.

Christmas Tree Electric Outfits

are ready sellers. No danger whatever. They may be had with battery attachment or for direct connection to electric light wires.

PRICES ON APPLICATION. SEND FOR CATALOGUE No. 20. EVERYTHING ELECTRICAL.

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<p>This list is for the purpose of placing retailers, manufacturers' jobbers and other readers in touch with reliable and competent accountants and auditors whose services are so frequently required for such purposes as opening books,</p>	<h2>Leading Canadian Accountants and Auditors</h2>	<p>adjusting and auditing accounts, arranging partnerships or organizing joint stock companies, devising special office systems, making collections and investigations, handling estates, making valuations, etc.</p>
<p>DAVID HOSKINS, F.C.A. Chartered Accountant, Auditor, Financial Valuator. 27 Wellington Street East,</p>	<p>Toronto, Canada.</p>	<p>JENKINS & HARDY, Assignees, Chartered Accountants, Estate and Fire Insurance Agents. 15½ Toronto Street - Toronto. 465 Temple Building, Montreal. 100 William Street, New York.</p>

<p>This list is for the purpose of placing manufacturers, wholesale and retail merchants and other readers throughout Canada, and firms abroad doing business in Canada, in touch with the legal profession throughout the Dominion, for the collection of accounts, legal representation,</p>	<h2>LEGAL CARDS.</h2>	<p>organization of companies, the arrangement or dissolution of partnerships, or assignments, as well as all other matters of a legal nature. For advertising rates apply to MacLean Publishing Co., Limited, Montreal or Toronto.</p>
<p>TUPPER, PHIPPEN & TUPPER, Barristers, Solicitors, Etc. Winnipeg, Canada.</p>	<p>ATWATER, DUCLOS & CHAUVIN Advocates. Montreal. Albert W. Atwater, Q., Consulting Counsel for City of Montreal. Chas. A. Duclos. Henry N. Chauvin.</p>	<p>This Space \$15 a Year.</p>

<h2>Educational Department.</h2>	<p>The following institutions for the education of business men's sons and daughters are recommended by this paper :</p>
<p>1889. The Belleville Business College, Limited, Business firms get the best results by applying to us 10 days before vacancies occur in their employ. See Catalogue pages 21, 27, 33, 41. J. A. Tousaw, } Secretary. } BELLEVILLE, ONTARIO. { J. Frith Jeffers, M.A., President.</p>	<p>TELEGRAPHY SHORTHAND <i>METROPOLITAN Business College</i> - OTTAWA, ONT. - BOOK-KEEPING TYPEWRITING</p>
<p>St. Margaret's College, Toronto A Boarding and Day School for Girls. Thorough courses in every department. Only teachers of the highest academical and professional standing employed. GEORGE DICKSON, M.A., Director. MRS. GEORGE DICKSON Lady Principal.</p>	<p>One inch space in this dept. \$45 per year.</p>

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The best treatment for all persons afflicted with the disease of drunkenness is known only to Dr. MacKay. Address: City Hall, Montreal, Que. Absolutely private treatment.

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THE OFFICE END

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OFFICE STAFFS OF
BUSINESS
ESTABLISHMENTS

FORMING A JOINT STOCK COMPANY.

A few items of general interest to the bookkeeper employed by an industrial concern which has amalgamated or formed into a joint stock company.

By H. R. W.

AN amalgamation is usually formed for the purpose of self defence against unjust competition, with a tendency, if anything, to lower rather than raise prices. The object of an amalgamation is primarily to concentrate interests, the entire business being under one executive head and management, hence the policy governing the business is the same; to reduce expenses, such as managers' and foremen's salaries; traveling expenses, one traveler carrying one set of samples covering the same or almost the same ground as was previously covered by two or three salesmen from the different companies before amalgamating, who crossed and re-crossed each other's ground continuously; and lastly, a very important feature to the shareholders, to increase profits, which need not necessarily arise out of increased selling prices but by purchasing raw materials in larger quantities at lower prices and discounts, and turning out larger quantities of goods at less cost of manufacture.

A promoter is one who brings about the incorporation and organization of a company, brings together the persons who become interested in the enterprise, and aids in procuring subscriptions and in the formation of the company.

The prospectus issued when public capital is solicited is very often inserted in the daily papers, and should contain the proposed operations, prospects and advantages of the new company, names of directors, which very often influence the investor even more than the auditor's certificate; the number of shares, and anything else which may bring the company favorably before the public.

A prospectus should contain the truth, the whole truth and nothing but the truth. Subscriptions have been set aside for the misrepresentation of material effects. As to the manner in which the profits of the amalgamating companies should be set forth in the prospectus there is a difference of opinion.

The most satisfactory way to the investor would be to show the annual net profits for each company separately for a period of say five years previous to the amalgamation, in this way showing the earning power of the individual company each year.

Unissued stock is sometimes called treasury stock. A trust company will very often underwrite the stock of a company, i. e., will for a commission agree to take such shares as the public has not applied for.

The paid-up capital is the money which the company has on hand; the subscribed capital the amount which is pledged by shareholders, subject to call at any time; the nominal capital that to which it is entitled according to the charter.

Goodwill or general public patronage, reputation of goods, special brands and trade marks recognized by the public, sometimes said to be simply the sale of a mere chance which vests in the purchaser nothing but a possibility that a preference, which has generally been extended, may continue, sometimes considered a property, forms a part, and sometimes a very large item in an

amalgamation. It depends largely upon the nature of the business and its length of operation, and is arrived at simply by an agreement between the vendors, the parties transferring their respective businesses.

In some cases all assets, both fixed and moveable, are transferred to the new company, as well as all liabilities, but the method of effecting a transfer which meets with general favor to-day is to arrange to have the individual companies collect all accounts receivable contracted prior to the transfer of the business, and also pay all accounts payable, and other liabilities, the new company taking over the plant, stock, etc., only.

The course of procedure with companies intending amalgamation depends largely upon the agreement with the vendors and the circumstances of each case. Probably the first step after the documents necessary to the transfer are completed, would be for each concern to take stock of all merchandise, and value the plant and equipment, goodwill and other assets, which, after being audited by an accountant, would be transferred to the new company and stock given in payment of same.

Should the estimated value prove to be less than the actual value when ascertained, the new company would either pay cash for the amount transferred over and above the estimate, or give additional shares for such, but if the estimate prove to be more than the actual value of the stock, the vendors would, of course, pay the company the difference. If the value may be readily ascertained, the stock being small or consisting of only a few lines, no such course would be necessary, the individual companies simply receiving shares in the new company in payment of amount transferred.

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Over Snow Hill Station.
Manufactured by Trinity Works,
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"BUTLER" was Registered as
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CANADIAN TRADE WITH CARDIFF.

THE interest of Canadian exporters centres largely in securing suitable ports abroad; that is, ports which allow of requisite dockage, storage and shipping facilities, and by their location assist materially in furthering prompt and efficient distribution of goods to the various consuming centres. The better the location the greater the success that must undoubtedly attend the efforts of the shipper. In this connection the attention of The Canadian Grocer was recently called to the port of Cardiff, Wales, on account of the many advantages it offers to Canadian fruit exporters. According to a leading Welsh journal, Cardiff's dock accommodation is unique, its shipbuilding yards of growing importance, and being in touch by rail with all the leading consuming cities in England, it is well suited to become one of the most popular receiving and distributing centres for foreign and colonial fruits in the United Kingdom.

Immense quantities of imported fruits are now consumed in West of England districts, the increased importations of recent years being largely due to the development of the distributive fruit trade in the cities and towns between Cardiff and Birkenhead. The wholesale fruit shippers, merchants and dealers in Cardiff enjoy every necessary facility for building up an immense trade. They can supply the Midland and Northern cities and markets, including London, Leicester, Sheffield and Birmingham, in the most efficient and economical manner. With regular and direct steamship services devoted to the foreign and colonial fruit trade, Cardiff would soon become one of the most influential ports on the west coast, because it offers such excellent facilities for controlling the demand in the Midlands, its position readily enabling its merchants and importers to deal with large shipments upon a profitable basis.

In respect to Canadian, American, Californian and Canary Island fruits, the import trade is especially promising. Cardiff offers a first-class opening for extended shipments of goods from each of the above mentioned producing sections. Canadian apples can be received and sold with the utmost dispatch. Not only does Cardiff command the Midland fruit trade, being in direct contact with the largest and best buyers there, but through no other port can the increasing consumption in Wales be dealt with. The reputation of the fruit importers and merchants of Cardiff, moreover, is recognized by all sections of the trade throughout the four kingdoms.

Cardiff is geographically the natural ocean port for the Midlands, which include Birmingham and Staffordshire,

largely populated by industrial classes also. The importance, for instance, of Cardiff for the Canadian trade in undoubted. From Montreal, via Cardiff, the distance to Birmingham is 2,874 miles; to Liverpool, 2,906; Milford, 2,904; and Southampton, 2,913 miles. The importance of a mining and industrial population to colonial fruit shippers cannot be too strongly insisted upon. In proportion to population the import trade for fruit and foodstuffs is better in Cardiff than in London, over a quarter of a million bushels of Canadian and American apples being dealt with by Cardiff firms each year. Quantities are brought direct by the Lord line of steamers from Montreal. The demand, however, is in no way satisfied by these arrivals, and has to be met by supplies brought from other ports. It is estimated that 1,000,000 bushels of Canadian apples could easily be disposed of at good prices in Cardiff each year if direct and regular shipments were forthcoming. It seems rather surprising that the Cardiff distributors, through the want of adequate direct shipments of oranges, apples, etc., have to draw their supplies from distant import centres. The fact that they do this, and yet have a vastly increased local trade to deal with, is proof of the importance of Cardiff as a receiving and distributive centre for fruits.

From these observations it would seem that Canadian apple shippers could make no mistake in using the port of Cardiff. The Lord line steamers ply directly between Montreal and Cardiff. From the representatives of the Lord line at Montreal it is learned that the great drawback to regular and profitable sailings has been the inability to obtain return cargoes, a matter the commercial interests of Cardiff through its Chamber of Commerce ought to look into. Lumber, flour, grain, cheese and butter are some of the principal Canadian exports which could be carried and there is little doubt but that a satisfactory carrying trade in these commodities could be managed were the interests on the other side to be exploited as they deserve. The agents of the Lord line report that instead of two sailings per month some few years ago they have been compelled to put their boats on other routes and during the past season have only been able to send out two vessels. Lumber, which constituted a considerable proportion of the freight, has, owing to poor business abroad, become practically a dead letter. The Lord line would no doubt be willing to make regular and more frequent sailings, but it must have return cargoes. Hardware and Metal has always argued in favor of a greater interchange of

business between Canada and the Mother Country, and to that end has advocated better shipping, railway, terminal and other facilities which tend to increase mutual trade. Judging from Welsh journals' remarks the merits of Cardiff are strong, and it is to be hoped that action will be taken by the shippers and importers on both sides (particularly the most directly interested business men of Cardiff) which will result in steady and increased trade.

AN INTERESTING EVENT.

THE Western Daily Press, of Bristol, England, contains an account of an interesting event which occurred recently, namely, a dinner of welcome tendered by the Constitutional Club to Mr. W. A. MacKinnon, who recently went to Bristol to serve in the capacity of Canadian Commercial Agent.

It would almost seem as if another era in the development of closer trade relations between Canada and the Mother Land had dawned when representative British business men see fit to confer such a signal honor upon a representative of the Department of Trade and Commerce of the Dominion of Canada. Not only does it show that Canada is coming to be looked upon as one of the commercial nations of the world, but that Great Britain recognizes her wisdom in sending commercial representatives to foreign countries as a means of building up her trade and commerce, so much so that the general opinion expressed at the banquet was that Canada's example in this particular might be imitated with advantage.

The commercial agency system as a branch of the work of the Department of Trade and Commerce, Ottawa, has now been in existence for a number of years, one of the commercial agents in Australia having been at his post for more than a decade. It was only recently, however, that Sir Richard Cartwright, as Minister of Trade and Commerce, began an extension of the system, and appointed in rapid succession commercial agents with headquarters at Birmingham, Leeds, and Manchester. Bristol was the fourth centre in Great Britain to become the headquarters of a Canadian commercial agent.

It is the duty of these commercial agents to find new outlets for Canadian goods, and to place Canadian exporters in touch with possible customers in the different countries. Their duty is to advise shippers what lines of goods, what quality and quantity are wanted, also what styles of package will best meet the demand of foreign trade or endure with the minimum of damage the long journey from producer to consumer. Another important part of their func-

THE FEATHERWEIGHT MIC-MAC HOCKEY SKATE



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THE HIGHEST QUALITY ONLY—
LIGHTEST AND MOST RIGID SKATE
MADE—STANDS THE ROUGHEST
USAGE and MEETS THE MOST AD-
VANCED IDEAS OF THE BEST
HOCKEYISTS—In presenting it to your
customers you take no risk, every SKATE
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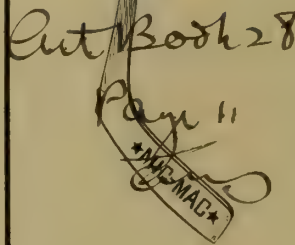
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Hockey Sticks are the best, made of yellow birch, the natural grain of the wood conforming to the curvature of the blade—NOT STEAM BENT—making them exceedingly tough and practically unbreakable. The same rigid inspection is followed as with STARR SKATES. Proof of popularity: 50 per cent. increase in volume of sales over last year. Trade-mark—MIC-MAC—registered both in Ottawa and Washington. See that your sticks have the trade-mark on every blade. Infringers will be prosecuted. We can now fill orders promptly from stock on hand.

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CO., Limited

DARTMOUTH, N. S.
MANUFACTURERS OF THE
Famous Starr-Made Skates

Branch: 59 York Street, Toronto.
TELEPHONE, 123 MAIN.

About a Horse Nail.

"A little neglect may breed great mischief; for want of a Nail the shoe was lost; for want of a shoe the Rider was lost—being overtaken and slain by the Enemy—all for want of care about a Horse-Shoe Nail."

—Benjamin Franklin, 1758

Just a few words about ourselves and our "C" brand horse nails.

This Company was established in 1865, and we have therefore been manufacturing horse-shoe nails for 39 years. We make nothing else, and are the largest producers of horse nails in Canada; we believe nearly equal to all the other makers combined.

Our "C" brand horse nails are of one quality only—the best that our long experience can produce. We use for their manufacture exclusively a special quality of material, made for our purpose in Sweden, which is the best procurable in the world, or used by any maker of horse nails.

We use the old and well-tried hot forged process, by which the nails are thoroughly forged by special

machines from the nail rods at a white heat, and finished and pointed by a mechanical process used only by us in Canada.

Every nail is hand sorted and examined, to prevent any imperfect nails from entering a box bearing our "C" brand. Every box is therefore warranted perfect and ready for immediate use.

Our nails are of the best designs and proportions for Canadian use. They will drive easiest, and stand more hard usage than any other horse nail made or sold elsewhere.

We solicit your kind preference for the "C" brand horse nails when ordering.

We shall be glad to furnish free samples of our various patterns to farriers or dealers.

CANADA HORSE NAIL COMPANY, MONTREAL.

tions consists in informing Canadian shippers what mistakes are complained of by local importers; in short, what obstacles are preventing a satisfactory development of Canadian trade and what suggestions the importers could make with a view to the removal of such obstacles. Similarly commercial agents are instructed to afford importers every information regarding Canadian sources from which they may draw their supplies. Since one-sided trade is never satisfactory nor permanent, the various Canadian commercial agents are making a strong effort towards the development of return trade. Generally speaking, however, they aim to exploit as thoroughly as possible the markets of the countries in which they are stationed for the benefit of Canadian exporters.

TRADE AND PERSONAL NOTES.

Mr. John Wright, plumber, of Toronto, died on December 11.

A new factory for the manufacture of hardware specialties will be located in Strathroy, Ont.

The machinists of Winnipeg have arranged for a ball, to be held in Manitoba Hall, on January 18.

The employers of the Standard Silver Co., Toronto, held an at home at St. George's Hall on December 9.

The building and stock of Macdonald & Fleming, hardware merchants, Winnipeg, was completely gutted by fire. The loss is estimated at \$25,000.

A wholesalers' curling league has been formed in Winnipeg, with twenty-one teams, each one representing a wholesale house, drawn in the series.

The Whiting Foundry Equipment Co., manufacturers of foundry plants, cranes, engines, etc., of Harvey, Ill., are desirous of locating in Guelph, Ont.

Mr. Rufus Cobleigh, traveler for the Frost & Wood Implement Co., fearing he was becoming insane, committed suicide at his home in London, Ont.

Mr. E. W. Wilkinson, representing Harrison Bros. & Howson, manufacturers of cutlery, Sheffield, Eng., was in St. John, N.B., last week, on his annual business trip.

Mr. C. H. Waterous, president of the Waterous Engine Works Co., of Brantford, has consented to become a candidate for the mayoralty at the coming municipal elections.

Mr. L. T. McDonald, buyer for the American Abell Engine and Thresher Co., Toronto, has been advanced to the post of manager for the company in the Northwest Territories.

Mr. Geo. S. May, of the firm of Geo. May & Sons, wholesale leather merchants, Ottawa, has been selected as one of the Liberal standard bearers in the coming provincial election.

Mr. C. B. Armitage, Glenboro, who sold his hardware business quite recently, has located in Regina. Mr. Armitage will leave for the west shortly to take charge of his new business.

Mr. C. C. Ballantyne, manager of the Montreal branch of the Sherwin-Williams Co., was the guest of the Toronto Manufacturers' Association at their weekly dinner, held on December 14. Mr. Ballantyne hopes shortly to get the Montreal branch to hold similar dinners.

Two actions for damages have been brought against the Toronto Bolt & Forging Co., Swansea. Both the plaintiffs claim they received injuries through the explosion of a boiler in the company's factory last Fall.

Mr. E. J. Laverdure, hardware merchant of Ottawa, has announced his candidacy for the city council. Mr. Laverdure was born in Ottawa in 1864, and has been connected with the hardware business for 25 years.

Mr. A. B. Cowan, vice-president of the firm of Cowan & Co., of Galt, Ont., manufacturers of wood working machinery, has returned from a business trip to Victoria, B. C. While on Vancouver Island recently he took orders for new saw mill machinery aggregating over \$20,000.

The Telephone City Stoves, Limited, Brantford, have purchased the retail stove and tin business of Mr. J. B. Turner, of that city. The new proprietors purpose an enlargement of the business, including the manufacture of tinware and sheet iron goods, also eavestroughing and dairy supplies.

Mr. J. Hofmann, manager of sales in Montreal for the American Axe & Tool Co., intends spending his Christmas holidays in New York City. While away he will visit the general offices of the company at Glassport, Pa., as well as several other immense concerns in the United States engaged in similar manufacturing.

Mr. Wm. J. Kerr, of Kerr & Coombs' foundry, Hamilton, died on Dec. 13. The late Mr. Kerr was born in Kingston 70 years ago, removing to Hamilton in 1871. For many years he was connected with the W. J. Copp Foundry Co., but eleven years ago he and Mr. Coombs organized the Kerr & Coombs Foundry Co., which he has managed ever since.

The death occurred at Montreal this week of Mr. A. MacPherson, who throughout most of his life was associated with the hardware business. He came to Montreal at the age of twenty, and entered the employ of J. H. Evans, hardware merchant, with whom he remained five years. He then formed a connection with Mr. W. Benny, under the firm name of Benny, MacPherson & Co. Later he started the firm of Alexander MacPherson & Son, and by devoting himself entirely to business built up one of the important hardware businesses of Canada. Mr. MacPherson was an active worker of St. Paul's Presbyterian church, Montreal.



WELLAND CANAL

Tenders for Supplies for the year 1905.

SEALED TENDERS for Supplies, addressed to the Superintending Engineer, Welland Canal, St. Catharines, will be received until 16 o'clock, on Tuesday, the 3rd of January, 1905, for the supply and delivery of various articles of Timber, Hardware, Castings, Fuel, Paints, Oils, etc., for use on the Welland Canal and its branches for the year 1905.

Specifications, forms of tender and other information may be obtained at the Superintending Engineer's Office, St. Catharines, on and after Monday, the 12th December, 1904.

The lowest or any tender not necessarily accepted.

By order,

L. K. JONES,

Secretary.

Department of Railways and Canals,
Ottawa, 5th December, 1904.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

FOR SALE.

HARDWARE business for sale; stock \$3,500; good opening; excellent fixtures. A. W. Kelly, Collingwood, Ont.

PATENTED hardware specialty for sale; number of Canadian patent 87136, May 10, 1904, United States, 753165, Feb. 23, 1904; there is a large market for this article; only parties interested need apply, address R. H. Rusden, Rossland, B.C. (51)

WANTED.

FLAT WANTED in Toronto; floor space 3,000 or 4,000 square feet. Address Box 204, HARDWARE AND METAL, Toronto. (51)

BUSINESS CHANCES.

THE LOCATORS—W. B. Herbert, general manager, the largest and oldest exclusive business brokers in the West. Address The Locators, Merchants Bank Building, Winnipeg.

HARDWARE—Good clean stock at 85c.; must be sold on account of the owner having other interests; would amount to about \$2,500 with a reasonable cash payment; and to a suitable buyer we can arrange a bill of credit with a responsible house. The Locators.

HARDWARE—about 150 miles from Winnipeg; small stock; good trade; about \$1,400. The Locators.

HARDWARE AND IMPLEMENTS—In a good growing town; but on account of ill health the owner must sell; can be bought with a cash payment of \$1,000; great opportunity for a live young man. The Locators.

HARDWARE—Another in a first-class locality; stock about \$4,300; 7 elevators; population 2,200; does about \$15,000 a year. The Locators.

IMLEMENTS—In the Territories; stock about 6,000; clearing \$4,000 yearly; one third cash balance easy; established three years; population 26,000. The Locators.

WOOLEN MANUFACTURE—This is not in the hardware line; but we quote it as it is intended for a party with \$15,000 to purchase half interest in a very live concern; owner wants to make additions to his buildings and extend his business; big profits, write at once about this. The Locators

FOR above or any other business, address The Locators, Merchants Bank Building, Winnipeg. Write for our free book "Business Opportunities" in the Great West.

HOUSEHOLD
HOTEL OR HOSPITAL
WARD SERVER



Made to hold an ordinary dinner plate with eatables and hot water which keeps meal warm.

Suitable aluminum dinner plates are also made to fit and are preferable owing to their heat retaining qualities.

ALUMINUM

Hot Water
Articles

with

Heat Retaining
Qualities

SEND FOR OUR
1905
CATALOGUE

We make to order
Castings, Spun and Stamped Work

DOUBLE BOILERS



Made in 3 sizes.

Hot water, combined with the heat retaining qualities of aluminum, makes the double boiler a very desirable article.

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Canadian Aluminum Works, Limited, Montreal

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Office: 13 St. John St.

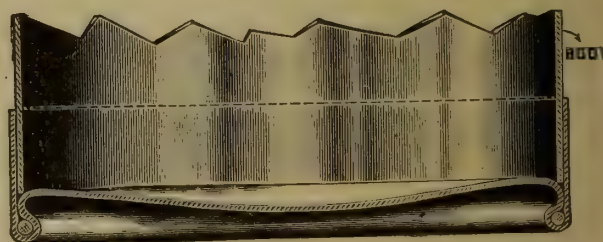
"Samson" Milk Can Trimmings.

Strongest, neatest, most sanitary
and only one-piece bottom made.

Has no seams or rivets to corrode and collect dirt.

Every bottom in each size is of an exact diameter. Being stamped out with a die—not spun—there can be no variation as in a bottom made in several pieces.

Requires less solder and work in putting together than pieced bottoms—also wears longer.



Section of "Samson" Milk Can Bottom.



The McClary Manufacturing Co.

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

"EVERYTHING FOR THE TINSHOP."

PATENTED, JULY 23, 1900.

HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,

Montreal.

The MacLean Publishing Co. Limited

Publishers of Trade Newspapers which circulate in the Provinces of British Columbia, North-West Territories, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, P.E. Island and Newfoundland.

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TORONTO	- - -	10 Front Street East. Telephone Main 2701.
WINNIPEG, MAN.	-	Room 515, McIntyre Block. Telephone 1846.
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MANCHESTER, ENG.	- -	I. Meredith McKim. Telephone, Central 12960.
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Great Britain and elsewhere - 12s

Published every Saturday.

Cable Address { Adscript, London.
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New Advertisements:

Silica Barytic Stone Co., Ingersoll, Ont.
Starr Mfg. Co., Dartmouth, N. S.

CANADIANS AND BRITISH INDUSTRIES.

A MOVEMENT is on foot to have Canadian manufacturers to the number of 300 or more visit Great Britain next Summer. The suggestion emanated in the first place from the London Chamber of Commerce, which body in conjunction with certain influential friends in Canada is reported to have already completed arrangements for the entertainment of their colonial visitors in July, 1905.

It would be a difficult matter to estimate the far-reaching influence of such a visit on the commerce, sentiment and patriotism of Canada, especially when it is remembered that her destiny as a nation is largely in the hands of just such men as will go to England as representatives of the Canadian Manufacturers' Association. They have already established the worthiness of the commercial

fabric of Canada. At the same time they have learned the value of education, and by this time appreciate the importance of demonstrating to the Englishman what has actually been accomplished as well as what may be accomplished in Canadian manufacturing circles.

The manufacturers will have an opportunity to inspect the finest manufacturing of Great Britain and to discuss and decide upon a basis for exchange trade between the two countries. Lord Strathcona has shown a keen interest in the movement, and it is hinted that Lord Brassey who paid such an interesting visit to Canada at the time of the Chambers of Commerce Congress, is giving it his personal attention.

It ought to go far towards removing misconceptions, and strengthening the ties between Canada and the Motherland. It will come, moreover, at an opportune time, as a challenge to the American press which is overflowing with reciprocity talk at the present time in spite of the assurance of the Hon. Geo. E. Foster at a banquet in Boston the other day that reciprocity had become a dead issue in Canada. The English press has recently shown an inclination to indulge in groundless fears concerning Sir Wilfrid Laurier's alleged friendly attitude towards reciprocity with the United States. The real calamity here, however, is the diverting of public attention to an issue in which Canada has absolutely no interest.

WHERE THE FIRST TELEPHONE WAS MADE.

ON a pine clad eminence about a mile and a half from the City of Brantford, stands a house whose historic interest will grow with the growth of Canada's trade. It is the house in which was invented by Prof. Bell the first telephone.

In these days of universal telephones it is not easy for us to realize that it is little more than a generation since that great and marvellous invention was introduced to the public. It would perhaps be an exaggeration to say that it has revolutionized commerce, but it is not going too far to say that by facili-

tating commercial intercourse to an extent undreamt of by an earlier generation it has given an impetus to trade hardly less than that caused by the introduction of the telegraph.

The house in question was built by a Mr. Morton, whose grandson, Mr. Foster, conducts at the present day a flourishing wholesale grocery business in Brantford. The house was later acquired by Mr. Bell. It is from the foregoing historic circumstance that the City of Brantford derives its familiar appellation of "The Telephone City." One is glad to learn that the civic fathers of Brantford have ideas of acquiring the house and preserving it as a national monument.

THE POSTAL C.O.D. SCHEME.

WE are pleased to note that the attempt made by the British postmaster-general, Lord Stanley, to introduce the postal cash-on-delivery system into England and the British Isles, has proved a failure. Such a volume of protests poured in upon him that the bill legalizing the introduction of the system has been withdrawn. Every retailer from one end of the land to the other raised his voice against the innovation, with the result that Lord Stanley found himself opposed by such a solid phalanx of the retail interests that to proceed in the face of it was rank foolishness.

Canada's interest in this incident has not been merely that of a spectator. Lord Stanley had his eye on the colonies quite as much as on the home land. He went to the trouble of sounding the postal departments of all the colonies on the question.

While we are not aware what was said by our own postoffice authorities, it is quite patent what would be said by the commercial interests of this country, outside a small section comprising a few manufacturers and the big department stores. Canadian retailers, we take it, would be quite as loud in condemnation of the scheme as any of their British contemporaries.

C. o. d. means more trade for the large central establishments, who advertise far and wide, and less business for local merchants who are unable to advertise outside their own im-

mediate neighborhood. Small businesses are already sadly handicapped, and the result of still further diminishing their sphere of action would be disastrous to many of them.

CEMENT.

WHEN the City of Toronto invited tenders a few days ago for the supply of Canadian Portland for the season of 1905, much speculation was indulged in as to what price would be paid. This cement is used by day labor only, and the city consumes between two and three thousand barrels annually.

Much surprise was manifested when it became known that the contract was awarded at \$1.54 per barrel in sacks, to the Lakefield Portland Cement Co., of Lakefield, for Monarch brand. This is the lowest price that was ever paid in the history of the city. The same company had the contract last year, but supplied it at a much better figure, namely, \$1.84 per barrel. This shows a decrease of 30c per barrel this year.

This low figure, which at one time would have been viewed as ridiculous, is due to the keen competition. New companies are coming on the market, and some of these firms, in order that they may give their manufactured article a substantial position have used the device of cutting the price, necessitating the same move on the part of other firms.

That more cement is being manufactured is quite evident. Statistics for 1903 show us that 695,260 barrels were made in Ontario then, as against 31,924 barrels in 1893, an increase of 663,336 barrels during the last ten years.

SHORTSIGHTED.

IT is a most shortsighted policy on the part of some Canadian manufacturers to refuse to advance prices on finished products, when there has been an advance on raw material. The fear that others may get their business on even terms evidently restrains them from doing the business-like thing. Over in the United States manufacturers act together whenever changes are contemplated, and we have yet to learn that it is to the detriment of any one of them.

ST. JOHN AS WINTER PORT.

NOW that navigation has closed on the St. Lawrence it is interesting to note the volume of trade finding outlet through our Canadian Winter ports.

It has been the delight of croakers at home and abroad to assume that Canada is dependent upon the United States as an outlet for her products during five months in the year. Nothing could be farther from the truth. There are no better harbors in the world than St. John and Halifax, while with slight

have her hull cleaned while the tide is out and get off with the next high tide. The huge C.P.R. elevator at St. John has drawn large quantities of grain to this port of late years and the value of goods exported through the port of St. John during the Winter season of 1903-4 reached the gratifying sum of \$15,745,301.

A Winter port statement issued by the St. John Board of Trade covering the season 1903-4 gives the following interesting details:

WINTER PORT STATEMENT, 1903-4.

Number of boats to U. K., 92; South Africa, 4; West Indies, 11; total 107.				
Grain.	Bags.	Bushels.	Value.	Total value.
Wheat.....		3,020,719	\$2,653,536	
Oats.....	1,974	452,237	204,022	
Barley.....	420	125,158	67,984	
Peas.....	2,298	91,955	67,360	
Corn.....	5,148	61,432	32,552	
Buck wheat.....	400	....	362	
Beans.....	112	....	560	
	10,352	3,751,551	3,026,876	\$3,026,876
10,352 bags estimated at 3½ bush. per bag.....		36,232		
		3,787,783		
Flour and meal.....		Packages, 265,513		\$1,342,780
Live stock.		Number.		
Cattle.....		25,399	\$2,058,928	
Sheep.....		20,953	152,945	
Horses.....		16	1,600	
		46,368	\$2,213,473	\$2,213,473
Lumber.		Spl. ft.		
Deals, boards, etc.....		24,631,677	\$ 710,399	
Other lumber.....			280,272	
			\$ 990,671	\$ 990,671
Hay.....		Tons, 12,344		\$ 127,294
		Packages.		
Cheese.....		163,574	\$1,358,914	
Butter.....		9,068	95,896	
Eggs.....		84,866	23,432	
Meats.....		35,337	3,364,367	
		292,845	\$4,842,609	\$4,842,609
		Bales, 8,414		\$ 34,468
Wood pulp.....		Packages.		
Lard.....		191,425	\$ 850,043	
Manufactures.....		113,539	640,047	
		306,964	\$1,490,090	\$1,490,090
Apples.....		Barrels, 67,419		\$ 170,590
		Packages.		
Apples.....		169,042	\$1,006,450	
Total.....				\$15,745,301

difficulty Sydney could also be kept open 365 days in the year.

St. John is inconvenienced to some degree owing to the extreme rise and fall of the tide there, but even this fact is not altogether without its advantages for at the market slip St. John has practically a dry dock. A vessel can run in here at high tide, discharge her cargo,

LIVELY SKATING SEASON.

THERE are very few Canadians who are not fond of skating, and it is pleasing to note the steady growth in popularity attained by this healthful pastime. There is nothing that instils more vigor and stamina into the youth, and older folks as well, than engaging in this popular exercise. We have advantages in the direction of out-door Winter

sports such as are possessed by perhaps no other country, and it is to the credit of the Canadian people that they are so well taken advantage of. The Winter in Canada has terrors only to those who are living in other countries, and who allow their imaginations to run riot regarding its severity. The error that exists regarding our climate needs only a personal visit on the part of anyone to change a former scoffer into an enthusiastic admirer. To many it is one of the most enjoyable seasons of the year, and what could be more invigorating and stimulating than the crisp clear air of our average Winter day. The attraction to stay outdoors on even the colder days is very great, and whether it is skating, skiing, tobogganing, snowshoeing, sleigh driving, or walking, that individual fancy leads to, the result is none the less beneficial. Those who have never experienced the intoxication of out-door recreation on a bracing sunshiny Winter day, are rather to be pitied, and with such very few Canadians would care to change places.

That skating, in common with other Winter sports, has become more popular, is well shown by the state of the skate market to-day. Greater preparations than ever before were made for this season's business, and now with the sport fairly started there has been an unprecedented depletion of stocks. Some sizes can scarcely be obtained, and prices are expected to be considerably advanced next season, if not this. It is a good sign, as the demand for skates might be taken as a criterion of the healthy state of mind and body of both young and old amongst us, who are more eager than ever to engage in this exhilarating pastime.

SAW THE ADVANTAGES.

DURING the past week an offer regarding our new monthly paper, Machinery (which has been the development of our attention to machinery in Hardware and Metal) was sent out. The offer was confined exclusively to subscribers of this paper.

We feel it is a proof of the enterprise and perspicuity of our readers that the first replies to the offer were received before the last letters had been sent out.

The offer was an exceptionally good one. It gave the hardwareman an excellent opportunity to increase the cordiality of relationship between himself and local buyers of machinery or engineers' supplies, and to do it at comparatively small expense.

The first reply, which was received from G. A. Binns, of Newmarket, one of the shrewdest and most energetic hardwaremen on our list, contains four names which are representative of the class of buyers likely to appreciate most thoroughly a first-class machinery paper. The names were as follows:

NAME *M^r Schmidt*
FIRM *Office Specially*
ADDRESS *Newmarket*

NAME *M^r Aubrey Davis*
FIRM *Davis Leather Co*
ADDRESS *Newmarket*

NAME *M^r T. C. Watson*
FIRM *Jewellers*
ADDRESS *Newmarket*

NAME *C. A. Thompson*
FIRM *machinist*
ADDRESS *Newmarket*

We must thank the many friends who have replied to our offer so promptly, and so in accord with our suggestions, at the same time thanking in advance other readers who shall send in their names during the next week.

PRICE ON VALVES.

PRICES on brass and iron valves, though slightly higher now than a few weeks ago, have not been advanced in proportion to the advances in cost of copper, tin, iron and other metals entering into their construction. This is probably due to the fact that many of the manufacturers of these lines in Canada have chosen to wait till they could be assured one way or the other what price these metals would stand at, rather than make an advance which might have to be retracted in the event of a downward turn of the metal market.

United States manufacturers, however, have not shown the same lack of confi-

dence in the market, and prices there have been advanced generally. It seems safe to predict that there will be an advance in Canadian prices at the beginning of 1905, as with depleted stocks, the restraining effect of the elections well over, and the undoubted shortage in raw material at present, increased demands may be looked for.

PARAGRAPHS OF INTEREST.

CEMENT production in the United States in 1903, according to the United States Geological Survey, amounted to 28,454,140 barrels. Of this amount 20,897,973 barrels were Portland cement, 7,030,271 barrels were natural cement, and 525,896 barrels were slag cement. The output of 1903 was about 2,700,000 barrels more than the output of 1902.

L. R. Lee, of the electricity station of the Manchester, England, Corporation, has invented an apparatus for the ventilation of watertight incased transformers used in the underground stations, which are liable to flooding. In the invention discriminating valves are fixed to the case or tank containing the transformer, thereby enabling a continual supply of air to enter and leave the tank.

An eight foot steel chimney, 230 feet in height, has just been completed and will be erected in Mexico. This will be the highest steel chimney in America.

HAS CHANGED HIS OPINION.

Sir Thomas Shaughnessy, president of the Canadian Pacific Railway, has given an order to the Algoma Steel Co. for 25,000 tons of rails, to be delivered promptly. This comes as an agreeable surprise when it is remembered that Sir Thomas was staunch in his opinion of the Canadian manufactured rail as an unreliable article for practical use. A keen controversy has been carried on for some time between the steel corporation and Sir Thomas Shaughnessy. However, they came to an understanding that they would agree on a verdict given by Captain Hunt, a steel rail expert of Chicago. After a thorough investigation Captain Hunt issued a report to the effect that no better rail was manufactured in America. This new demand will go far towards materially strengthening the works at the Soo. It is estimated that the annual requirements of the C. P. R. for repair work alone will keep the mill in operation for three months of each year.

MARKETS AND MARKET NOTES

(For detailed prices see Current Market Quotations, page 62.)

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Dec. 16, 1904.

Hardware.

COUPLED with the best of holiday weather, there is a stir and bustle in business circles that is having a very material effect on the volume of Christmas trade in hardware lines. With stocktaking and the unusual demand for seasonable goods, wholesale firms are having a busy time. Travelers are now at headquarters and business conventions and annual dinners are in order.

Prices continue as before, with one exception, being a reduction of 15c per cwt on galvanized staples. Inquiries are numerous, and goods are being shipped promptly.

Hockey Sticks and Pucks—There is a big demand. Quotations are as follows: Boys' hockey sticks, from \$1.50 a dozen up; men's, \$2.25 to \$3.50 a dozen; regulation pucks, \$2 a dozen; juvenile, \$1.15 a dozen.

Plated Ware and Cutlery—Christmas trade is still calling for large quantities. Our quotations are as follows: Rogers 1847 goods 45 per cent. off list; case carvers from \$2 to \$10 per set; scissors in cases 90c to \$2.

Skates—The skating season being in full swing the demand continues unabated. We quote: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Axes—Orders are being received daily for all styles. Our quotations are as follows: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—Quite a few, particularly axe handles, are being sent out. Our quotations are as follows: Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3, \$1.50 a dozen.

Carpet Sweepers—The orders for these have been unusually numerous, and of larger amount than before. Quotations, \$21 to \$31 a dozen.

Food Choppers—The demand has fallen off slightly, but is still fair. We quote: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Sewing Machines—This market continues brisk. We quote: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Lanterns—In view of the low prices unusually large orders are still being placed. Quotations are: Cold Blast, \$6; No. 0 Safety, \$4 a dozen.

Sleigh Bells—Trade in these has been stimulated considerably within the past week. Our quotations are as follows: Brass team bells, rough, \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5 a dozen; nickeled, \$2.25 to \$5.15 a dozen; brass greglots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—The absence of snow has meant a lessened trade in these from what was expected. We quote: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount; Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Barb Wire—The demand is very light. We quote as follows: \$2.75 per 100 lbs f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Fence Staples—A change in price is noted this week, being a reduction of 15c on galvanized. We quote: \$2.65 per hundred lb keg for bright, and \$2.85 for galvanized; 25 to 50 lb packages 25c extra.

Rivets and Burrs—There is an upward tendency, but no change to report. Discounts: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—Stocks are none too large, and the demand is only fair. Discounts are: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—The market is rather quiet, with an upward tendency.

Wire Nails—There is only a nominal trade being done in wire nails, although manufacturers are busy. We quote: \$2.20 per keg, f.o.b. Montreal.

Cut Nails—No considerable activity

exists. We quote: \$2.20 per keg f.o.b. Montreal.

Horseshoes—Manufacturers are busy with this line, and report considerable activity. Our quotations are as follows: "P. B." new pattern, base price \$3.50 per 100 lbs.; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—A fair amount of business is passing, for quotations see prices current.

Sporting Goods—The demand has fallen off very considerably within the past week, it being less than for some months. We quote: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand. Standard shot, \$6.50 per hundred lbs; chilled, \$7 per 100 lbs; buck and seal, \$7.50 per 100 lbs; ball, \$8 per 100 lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—There is very little stock moving, and this condition will probably continue until Spring.

Cordage—Manufacturers are placing orders for Spring delivery, and it is fully expected that an advance will take place before then.

Cement and Firebrick—This business has fallen off almost entirely. We quote: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—There is little stock moving. Quotations are as follows: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3; one inch, \$2.95.

METALS.

The general trend of the metal market has been towards an easing off, but in iron and steel the former strength and firmness prevails. The change in copper is believed to be a purely speculative one, and former prices rule. Stocks of pig iron are now well placed, and there is little moving. Considerable Midland has been booked ahead, and there is evidence of another advance. Canada plates and black and galvanized sheets are rather quiet, but prices are firm. The scrap metal market is in a satisfactory

December 17, 1904

HARDWARE AND METAL



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E. N. Cote



H. H. Valliere



J. C. Watson

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Answer



A. Rochette

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J. A. E. Bureau



C. L. Devitt

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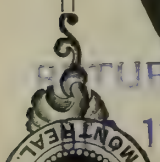


F. E. Dennison

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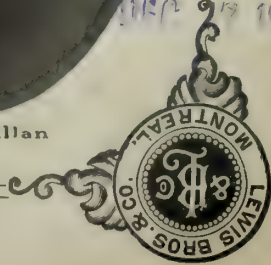
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condition and a good deal of stock moving. Brass and copper are being exported.

Pig Iron—Little further movement is expected in pig iron this season, although a large quantity has been booked for Spring delivery. Prices remain unchanged, but are firm.

"Disc," No. 1.....\$16.50 delivered Montreal.
"Dom.," No. 1.....17.50
Usual difference in price for lower grades.

Ferrona No. 1.....\$18.00 delivered Montreal.
" No. 2.....17.50 " "
" No. 3.....16.50 " "
" No. 4.....16.00 " "
Londonderry \$18.50 to \$19.00 delivered Montreal.
Glengarnock.....20.00 " "
Gartsherrie.....19.25 " "
Carnbroe.....18.50 " "
Carron No. 1.....19.50 delivered Montreal.
" (special).....18.50 " "
Ayresome No. 1.....18.00 " "
" No. 3.....17.50 " "
Summerlee.....19.50 " "
Clarence No. 1.....18.00 " "
" No. 3.....17.50 " "
No. 1 Cleveland....18.00 " "

Bar Iron—The demand is fairly good. We quote: Merchants' bar, \$1.77 1-2; horseshoe iron, \$2.02 1-2; forged iron, \$1.97 1-2, net cash thirty days.

Tool Steel—There is little activity. We quote: Black Diamond 8c to 9c; Sander-son's, 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb; Conqueror, 7 1-2c; Conqueror High Speed steel, 60c.

Merchant Steel—Not a great deal moving. The market is firm. We quote: Sleighshoe, \$1.82 1-2; tire, \$1.92 1-2; spring, \$2.75; toecalk, \$2.42 1-2; machinery (iron finish), \$2.02 1-2; square harrow, \$1.92 1-2; reeled machinery steel, \$2.75; mild, \$1.82 1-2; rivet, \$1.82 1-2; net cash thirty days.

Cold Rolled Shafting—The demand for this has lessened somewhat, although there is still considerable moving. We quote: Cold rolled shafting, 3-4 in. to 17-16, \$3.85 per 100 lbs; inch and a half to 3 inch, \$3.50 per 100 lbs.

Canada Plates—Although an advance was expected before this, none has taken place. There is little stock moving. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—Most firms have already laid in their stock, so that the present market is quiet. Quotations are as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—The recent activity has ceased, but many inquiries are coming in regarding Spring shipments, none of which are being quoted at the present prices. We quote: Queen's Head, 28 gauge \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge, \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.15; "Windmill Best," 28

gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Antimony—There is no change whatever. The price is 9 1-4c to 9 1-2c.

Sheet Zinc—The market is slightly weaker at present, and fairly quiet. We quote case lots \$6.75 to \$7; small quantities, \$7 upward.

Tin Plates—Tin was much more active a week ago. The price remains unchanged. We quote as before, cokes, \$3.75, and charcoal, \$4.

Ingot Tin—The market is somewhat easier and a reduced price of half a cent a pound is quoted. We quote: 32c to 32 1-2c with no shading whatever.

Ingot Copper—The slump in copper was merely a speculative one and prices have not been lowered, but are expected to be firmer. We quote: 16 to 16 1-4c, the former price being for quantities only.

Ingot Zinc—This market has been advancing for some time past, but is weaker at present and prices remain as before. Quotations are 6 1-2 to 6 3-4c, the former being firmly held and for quantities only.

Pig Lead—Lead has been firmer and weaker by turns, within the past week, closing with a slight easing off. We quote: \$3.50 to \$3.60, no concessions being obtainable on the former price.

Boiler Tubes—The demand continues fairly active. Our quotations are as follows: Highest grade soft steel British and American tubes, one and a half inch, 7 1-2c; 2 in., 8 1-2c; 2 1-2 in., 10c; 3 in., 12 1-4c; 3 1-2 in., 16c; 4 in., 20c; 5 in., 45c. Price per foot net.

Scrap Metal and Old Material—There is a general impression that all lines in the scrap metal market will advance shortly. In wrought scrap the demand is increasing, as well as for all rolling mills material. An advance in old rubbers is quoted. We quote as follows: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 2 1-4c; zinc, 2 3-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 5 1-2 to 6c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,

10 Front street east,

Toronto, Dec. 16, 1904

Hardware.

FOR the week preceding Christmas week the hardware jobbing trade is very brisk. Usually there is a quiet fortnight or so before Christmas, but this year is an exception. Trade, of course, is not what it was a month ago, but still things are moving quite freely. The lines most in demand are Winter lines, including sleigh bells, skates, hockey sticks, sleds, etc. Retailers are now fairly well stocked for the Christmas trade, but rush orders are still coming in for Christmas goods.

The Toronto jobbers have decided to

raise the price of cut nails from \$2.30 to \$2.40 f.o.b. Toronto. This does not include Hamilton jobbers. The price of shot has also been advanced owing to the advance in raw material. The advance consists of a reduction of the discount from 17 1-4 per cent. to 15 per cent. There are no other changes in quotations this week.

Lawn Mowers—Orders are being booked, but so far there is not much indication as to what will be the general market condition.

Guns and Ammunition—The usual good Fall demand is slackening down to the normal demand. Because of the advance in raw material the price of shot has been increased by a reduction of the discount from 17 1-4 per cent to 15 per cent.

Washing Machines—Nothing special is to be reported; the general trade continues.

Chain—The normal trade keeps up. We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Barb Wire—Prices remain firm at recent changes.

Galvanized Wire—The trade is normal with unchanged prices.

Coiled Spring Wire—Nothing special is to be reported. Quotations remain unchanged, and the usual business of this time of the year is being done.

Wire Nails—A good demand continues and the situation is unchanged, and an average quotation appears to be about \$2.25 f.o.b. Toronto, with carlots at \$2.20.

Cut Nails—The Toronto jobbers have this week raised the price of cut nails from \$2.30 to \$2.40 per keg f.o.b. Toronto. Hamilton jobbers are not included in this advance.

Horseshoes—There is a very good trade being done in this line, there being a noticeable run on Winter shoes. Our quotations are as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—There is a good demand with unaltered prices.

Screws—A good business is being done, with prices firm.

Rivets and Burrs—The volume of trade is good. Prices remain unchanged.

Bolts and Nuts—There is a good trade with firm prices.

Woodenware—Market conditions remain unchanged, and the normal business continues.

Cordage—Business is being well looked after, and orders for binder twine, for

next season's trade, are coming in. Prices are unchanged. Partial quotations are: Double shingle yarn, 101-2c; single shingle yarn, 10c; sashcord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton twine, 3-ply, 24c; 4-ply, 29c; walking cotton, 161-2 to 17c; cotton waste, colored, 63-4c; white, 11 to 12c.

METALS.

There is a continued strength on the metal market and buying is being freely done in nearly all lines. There is a very strong tin market, there having been further advances on foreign markets. The local market quotation has not, however, been altered. There has been an advance in Canada plates of 25c for all-bright. Otherwise quotations remain unchanged.

Pig Iron—The pig iron market is very firm and buyers are placing orders very freely. Midland iron cannot be had for delivery before June of the coming year, and orders are now being taken for delivery after that time. In comparison with the price of United States iron, Canadian iron is being sold at a low figure, in spite of the fact that some Canadian iron is booked so far ahead. Quotations are as follows:

Middlesboro, f.o.b., Toronto	18 9
Hamilton, No. 1	18 00
" No. 2	17 50
" No. 1, Hamilton	17 00 to 17 50
Midland, No. 1	18 00
" No. 2	17 00 to 17 50
" No. 1 f.o.b. Midland	16 25 to 16 75
Radnor, f.o.b. furnaces	27 50
Londonderry, f.o.b. furnaces	16 50 to 17 00

Bar Iron—There is a firm and active market. Quotations remain unchanged. We quote as follows: \$1.80 f.o.b. Toronto, with discount of 2 per cent.; for extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tin—Foreign markets exhibit a further advance and consequently the local market is very firm, although quotations have not been altered. Quotations are from 32 to 34c per pound.

Galvanized Sheets—A good demand is maintained. Prices are firm.

Tin Plates—An excellent trade is being done. Prices are steady.

Canada Plates—Stocks are still light. There has been an advance of 25c in all-bright plates, although other quotations remain unaltered. We quote: Half-polished, \$2.50; and all-bright, \$4.

Brass—There is an active market, with advance of last week holding firm. Discounts are 10 per cent.

Lead—The market continues firm, and sales are good. Quotations are: Pig lead, \$3.60 per 100 lbs; and bar lead \$3.60 per 100 lbs.

Zinc Spelter—There is a very good trade being done, with quotations firm at from 6 to 61-4c per lb for foreign and 51-2 to 53-4c per lb. for domestic.

Copper—Sales are somewhat light; prices are firmly maintained. Quota-

tions are: Ingot copper, 151-2c per lb; sheet copper, 20c per lb.

Cement—Manufacturers are holding off from booking orders till after the first of the year, hoping that better prices will then be current. Circumstances point to an advance rather than a decline. Americans, at a meeting held in New York, advanced the prices on some brands. This will relieve the Canadian manufacturer of the fears of keen competition and may have a tendency to advance the price. We quote the following: For carlot orders f.o.b. Toronto, Canadian Portland, \$1.70; American Portland, \$1.70. For small orders ex warehouse: Canadian Portland, \$1.90 to \$2; American Portland, \$1.90 to \$2.

Building Paper—Trade is quiet and no change is expected till the building season opens up in the Spring. Prices continue unchanged.

Firebrick—Although there is a scarcity in Scotch firebrick no advance is anticipated. Repairing has eased off till the holiday season, when a brisker trade is expected. Prices continue unchanged. Our quotations are: English and Scotch firebrick 30 to 35c; American, low grade, 25 to 30c; high grade 321-2 to 40c.

Old Material—A better demand is noted on the market for old rubbers and the price has advanced 1-4c per pound. As a result of the continual advance in "virgin spelter," scrap zinc has advanced and is now quoted at from 33-4 to 4c per pound. The firm condition of scrap copper and brass as noted on this week's market is in comparison with the conditions of the pig copper and brass market. Everything is moving more freely; larger orders are being received by jobbers all calling for prompt shipment. Dealers are looking forward to handling large amounts of scrap iron, copper, lead and brass during the next two months. Our quotations are as follows: Heavy copper and wire, 12c per lb; light copper, 11c per lb; heavy red brass, 10c per lb; heavy yellow brass, 8c per lb; light brass, 51-2 to 6c per lb; tea lead, \$2.35 per 100 lbs; heavy lead, \$2.50 to \$2.60 per 100 lbs; scrap zinc, 33-4c to 4c per lb; iron, No. 1 wrought, \$9; No. 2 wrought, \$2; machinery cast scrap, \$12.50 to \$13; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 51-2c per lb; country mixed rags, 65c per 100 lbs.

Coal—Some delay in shipping large orders is being felt as a result of the scarcity of cars. Slack coal continues to be scarce. Prices continue unchanged. We quote: Anthracite in cars at Briges: Grate, \$5.50 per gross ton; egg, stove and nut, \$5.75 per gross ton; pea, \$3.75 per gross ton.

Standard Hocking, soft coal, in cars, f.o.b. at mines: Lump, \$1.60; 3-4 inch, \$1.50; run of mine, \$1.40; nut, \$1; N. P. and S., 75c; coarse slack, 50c; box cars 10 cents per ton additional.

Roughiogeny soft coal in cars, bonded, at the bridges: 11-4 inch, \$2.60; 3-4 inch, \$2.50; mine run, \$2.40; slack, \$1.90.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B.C., Dec. 9, 1904

THE closing down of many lumber mills in the province will interfere seriously with trade in iron and steel lines. The industry more directly subsidiary to lumber manufacture is the foundry and machinery, and with the inaction of the mills there must also be a corresponding decline in other lines. About a dozen of the largest sawmills have already closed down for the Winter, and many more are to follow. Included are the Pacific Coast Lumber Co., the Rat Portage Lumber Co., Vancouver Lumber Co., Royal City Mills, Vancouver; North Pacific Lumber Co., Barnet; Canadian Pacific Lumber Co., Port Moody; Royal City Mills, New Westminster; Arrowhead Lumber Co., Moyie Lumber Co., Crow's Nest Pass Lumber Co., Wardner. The E. H. Heaps & Co.'s mill and others in this city will also shortly close down, and the big \$200,000 mill built near Cranbrook by Otis Staples, of Minnesota, although ready, will not be operated until Spring. The extent of this inaction in trade will be severely felt. It is owing to the continued depression in the trade, caused entirely by the thoughtfulness of the Government in Ottawa in allowing the mills of Washington to dispose of their surplus stocks of rough lumber in the only market Canadians have, namely, in the Territories. The Americans appreciate this kindness and are dumping their lumber in "at any old price," the retailer reaping a rich harvest, for the price is regulated by the British Columbia article. The settler gets little or no benefit, and this province suffers to its very marrow, for the principal industry is that of the manufacture of lumber, and Washington mills are aided materially.

So acute has the matter become that one great determined effort is to be made for the duty, and a deputation will go to Ottawa early in the new year, representative of the industry in all parts of the Dominion. On Monday last the largest meeting of business men ever held gathered in the Board of Trade rooms to present the facts of the case to Hon. Senator Templeman, Minister of the Cabinet without portfolio, and the members elect for British Columbia. The matter was gone into in detail, lumbermen, bankers and merchants taking part in the discussion.

• • •

Mining is steadily progressing in all parts of the province, and as it promises to continue there should be great activity in all lines. The reorganization of the Le Roi mine at Rossland, and the intention of that company to expend nearly half a million dollars in the erection of a concentrator, will tend to restore confidence with British investors. At Fernie, the increase of the payroll of the collieries for October over that of September was \$14,000, and 390 out of 426 coke ovens are burning. At Lille, also in that district, a coal mining town

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is being built up, by the operation of the Bellevue mines, which at present are turning out 450 tons per day. At the Camborne camp on Fish River, south of Revelstoke, some very rich strikes have been made, and high-grade ore will be shipped all Winter. The Daly estate, managed by M. K. Rodgers, which is making great money at the Nickel Plate mine at Hedley, has purchased the Maggie mineral claim in the Similkameen, and will proceed with its development. It is a high-grade copper proposition. On the west coast of Vancouver Island, Portland capitalists have invested \$100,000 in the Nahmint mine at Alberni, and will develop the property.

N. Thompson, who has promoted the Vancouver Drydock Co., has returned from England, and reports his project successful. Construction is now proceeding as rapidly as possible at Swan & Hunter's, Newcastle-on-Tyne. The first section of the dock will be 276 feet long, and capable of lifting 6,500 tons. The smaller section will be 234 feet long, and the combined capacity, for the two sections may be linked together, will be 11,300 tons, and will receive a vessel 600 feet in length.

Mr. Thompson also announces that English capitalists are coming to Vancouver next month at his solicitation to look over the ground with a view to starting a steel plant on this coast. It is a well known fact that the product of the mines on Texada Island entered into the construction of the U. S. battleship Oregon, and it is no secret that the steel from these ores is the equal of anything turned out on this continent. Besides, there are whole mountains of iron ore in this province on the mainland coast, and on the west coast of Vancouver Island. While in England Mr. Thompson secured the rights of one of the most modern methods of steel making, which cover British Columbia, the Territories, and the States of Washington and Montana.

• • •

Although zinc and barbed wire are higher in eastern markets, the local prices are unchanged. The hardware trade generally keeps active, a good demand being reported for holiday lines.

Mr. Thomas Kiddie, manager of the Ladysmith smelter, has received a Canadian patent on an ore barge specially designed to enable its load to be quickly discharged with a minimum of labor.

In Fernie a proposition is now under way to organize a capital stock of \$50,000 among the miners, and others, to acquire the business of the Crow's Nest Trading Co., general merchants. The company will be co-operative, and trade in the various camps of the coal district.

The B. C. Electric Railway Co., of this city, has completed the improvement of its facilities in Victoria, where a 1,000 k. w. machine was installed.

Mr. J. S. Chute, of Dawson, is in Vancouver this week, having come down to arrange for material for the Klondike

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Mines Railway, which will run from Dawson to Grand Forks.

A saw carriage for cutting bevel boards from a sawn cant has been invented by A. W. Tait, of Vancouver. This invention is directed to the attainment of a cheaper method of producing bevel siding, for which there is large and rapidly increasing demand in the building trade.

NOVA SCOTIA MARKETS.

Halifax, Dec. 12, 1904.

WHILE trade in wholesale hardware is nearing the quiet time of the year, and jobbers are starting in to take stock, etc., they are still in receipt of very good assorting orders. Travelers are out and sending in excellent reports. The fact that retailers are buying so freely for immediate requirements is taken as a good omen for future trade, and merchants here are looking forward with great hopefulness to the year 1905. Customers are meeting their indebtedness promptly, and business seems to be in a healthy condition. The opening of the South Shore Railway will be of advantage to Halifax merchants, as they will now be in a better position to meet competition in Western Nova Scotia from other distributing points.

There have been several advances on this market in metals since last report. Briefly these are as follows: Ingot tin has advanced 1c. Zinc and spelter have made a further advance of $\frac{1}{4}$ per cent. Sheet lead in rolls has advanced 25c. Lead pipe has advanced 35c per 100 lbs. All lines of staple hardware are firm and dealers are looking for a higher range of values during 1905.

Nova Scotia being so largely interested in mining, there is naturally a large trade here in mining supplies of all classes. The demand for these has not varied very much in recent years, though perhaps there is not quite the sale of gold mining requisites as was the case some years ago. Still there is a fair inquiry, for when one gold mine suspends for any reason there is usually another coming in to fill its place. In coal mining there has been some expansion in the demand for supplies. Lumbermen's supplies show a slight decrease in the size of the orders, some concerns curtailing their operations materially on account of the low price of lumber.

The free importation of cordage for fishermen's uses, through the consent of some New Brunswick customs officers, and which has deranged trade to some extent on the south shore of this province, is now in a fair way for definite settlement. The whole question has been referred to the Department at Ottawa, and a definite ruling will be established that for the future will place all jobbers on equal terms. The taste for free rope has whetted the appetite of our fishermen for the American article, and a petition is said to be in circulation praying for the abolition of the duty on all cordage used for fishing purposes.

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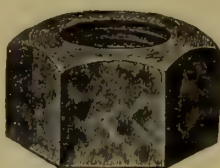
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Swift as lightning, sure as death and sure death to the animal. Strong, simple, substantial construction. "To get the best trap trade, sell the best traps made."

Write for prices to

J. M. Mast Mfg. Co., Lititz, Penna.

Canadian Ag'ts, C. H. Grenfell & Co., London, Ont.



Snap Shot



Old Nick



Write for Catalogue and Prices.

ICE HARVESTING TOOLS

For Butchers, Dairymen, Farmers, Ice Dealers, etc.

Ice Plows, Saws, Tongs.

Bars, Hooks, Axes, etc.

Robert Donaldson & Sons

30 YOVILLE SQUARE, MONTREAL, QUE.

UNITED STATES METAL MARKET.

Advance proofs furnished HARDWARE AND METAL by
The Iron Age, Dec. 15, 1904.

ON Saturday the steel rail manufacturers decided to open their books for 1905 delivery at \$28 per ton at mill for standard sections, and to fix a minimum at which angle bars be sold. Thus far comparatively few orders have been placed with the eastern mills, but it is understood that the western mills have entered about 150,000 tons. The Tennessee Co., one of the independent producers, with a capacity of about 150,000 to 175,000 tons annually, is carrying over a considerable volume of orders from this year, and has booked new business which will employ the mill to the middle of the next year. An order for 75,000 tons from a southern road now in the market, the bulk of which will probably go to this mill, will insure full employment for the whole of the year 1905.

The steel rail manufacturers, after a very careful and close study of the situation, have come to the conclusion that the tonnage which will come to them in 1905 will be very large, and will furnish very much better employ-

ment than this year, which was far below the average.

There has been some disposition to regard the purchase of pig iron by the leading interest as an effort to manipulate the market. The fact is that the metal was needed for immediate use, so far as the western purchases are concerned, and that in the east the company is practically dependent upon the open market. It is understood, too, that additional quantities will be purchased at an early date, for the central west, for January and February delivery.

The Carnegie Steel Co. purchased last week 25,000 tons of Bessemer pig for December delivery at \$15.50 at Valley furnace, this following the buying of close upon 20,000 tons of basic pig at about \$15 at furnace, for Eastern Pennsylvania and New England delivery, referred to last week.

In the foundry iron trade the markets have been quieter after the heavy buying of the past month or more. A large cast iron pipe interest has purchased 15,000 tons of Virginia iron.

The eastern trade is beginning to watch for possibilities of importation of foreign foundry pig, but as yet there are no chances, the market abroad having risen. It is possible, however, that some soft iron may come into New

England, aside, of course, from importations under drawback.

During the week a lot of 6,000 tons of foreign spiegeleisen has been taken by an eastern steel plant. There has been quite a large business during the past few weeks in foreign ferromanganese, and prices have advanced.

Among the larger structural contracts placed is one lot of about 9,000 tons of shapes and plates for the Boston Elevated, for which the material will be furnished by the Lackawanna mill, with some round lots coming up, among them one block of 8,000 tons in Chicago. The leading interest booked 40,000 tons during November, a great deal of it in small lots.

In the lighter finished branches there has been another advance of \$1 per ton in wire products and an advance of \$2 per ton on galvanized sheets. Premiums are being occasionally paid on tin plate, and continue in bars.

PITTSBURGH METAL MARKETS.

From the Iron Trade Review, Dec. 15, 1904

THE iron and steel trade in every department continues to show increasing strength, specifications now being received by the producers indicating a greatly increased consumption. Idle plants throughout this district are resuming, and even the foundry industry, especially the plants devoted to the manufacture of car castings report heavy inquiry and the closing of considerable business. That the improvement in the trade is not a spurt such as the market passed through earlier in the year is indicated by the continued activity in practically all lines despite the belief of manufacturers that the heavy buying movement had ended several weeks ago.

Pig Iron—Nearly all plants are again in operation. Last week the United States Steel Corporation purchased 25,000 tons of Bessemer iron for December delivery at \$15.50 at the furnace. During January additional iron will be required, estimated at 30,000 tons. Bessemer iron for delivery the first quarter is now held at \$16 and basic for the first quarter at \$15.75 to \$16 at the furnace. No. 2 foundry is held at \$17.35, Pittsburgh, and a few furnaces are asking \$17.50. Forge iron is held at \$15.50 at the furnace and little is to be had at this price. We note the sale of 3,000 tons of Southern forge on the basis of \$12.75, Birmingham, while a few operators are asking \$13. Southern No. 2 is quoted at \$13.50 to \$13.75, Birmingham. We revise quotations as follows:

Bessemer, Valley	\$15 75 to	\$16 00
Bessemer, Pittsburgh	16 00 to	16 85
No. 1 Foundry	17 75 to	18 00
No. 2 Foundry	17 35 to	17 50
Grav forge, Pittsburgh	16 10 to	16 35
Chilled basic, Valley	15 50 to	15 75
Chilled basic, Pittsburgh	16 35 to	16 60

Steel—Of the eight Bessemer plants of the Carnegie Steel Co. six are in operation and of the two idle plants the one at Mingo Junction will be started in a few days. Not one of the company's open hearth plants is off, the last idle plant at North Sharon having resumed this week. At the meeting of

the billet manufacturers to be held in New York next Tuesday prices will probably be advanced \$2 a ton, as this is the price that is now being asked for billets for forward delivery. We make the following quotations: Bessemer and open-hearth billets, 4x4 inches, and slabs, up to and including 0.25 carbon, \$21. f.o.b. mill, Pittsburgh; with actual freight to points of delivery; 0.26 and including 0.60 carbon, \$1 advance, 0.61 to 1.00 carbon \$2 advance. Billets smaller than 4x4 inches \$2 advance; sheet and tin bars, \$23; cut bars, \$23.50; forging billets, \$23. Bessemer and open-hearth steel rods are held at \$28.50 to \$29.

Rails and Track Material—On Saturday, December 10, the members of the rail pool at a meeting in New York formally decided to hold rails for delivery in 1905 at \$28, the price which has been prevailing this year. An announcement is expected this week of a large tonnage of rails placed by the leading roads of the country. It was also decided to hold angle bars at 11-4c, which is somewhat lower than they have been selling heretofore. Light rails have also been advanced in price, but they are still from \$4 to \$5 a ton below standard sections.

Bars—It is probable that a meeting of the steel bar association will be held in New York next week following the meeting of the billet association. Demand for both iron and steel bars is heavy.

Plates—At a meeting of the plate manufacturers to be held next week in New York prices will be advanced in proportion to the advance made in billets. Steel car plants continue to specify heavily and all the mills now have comfortable tonnages on their books.

Structural Material—The railroads are inquiring for a large tonnage of structural work to be erected next year and the outlook for the structural mills is unusually bright.

Pipes and Tubes—Heavy contracts have been placed by the leading jobbers throughout the country for their requirements next year and the total tonnage placed is several hundred thousand tons. Demand continues heavy and for this season the tube business is in flourishing condition.

Wire and Wire Nails—On Friday, December 9, an advance of \$1 was made on all wire products. The advance was looked for the first of the month but was delayed. Buying continues heavy and wire and nail plants continue to operate in full. We revise quotations as follows: Wire nails, jobbers' carload lots, \$1.75; retailers' carloads, \$1.80; and less than carloads, \$1.90; painted barbed wire, \$1.90 to jobbers in carloads; retailers' carloads, \$1.95, and less than carloads, \$2.05, with 30 cents for galvanizing. Annealed smooth fence wire is held at \$1.60, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburgh, 60 days, with 2 per cent. discount for cash in ten days. Iron and cut nails are held at \$1.75 and steel \$1.70.

Sheets—Demand for sheets continues heavy and the independent manufacturers are securing their share of the busi-



Eastlake
Steel Shingles

either Galvanized or Painted

Are Always They are more economically durable and quicker to apply than any others, fitting accurately—and therefore most easily laid.

Reliable They have been thoroughly tested in all kinds of climates, invariably proving **Fire, Lightning, Rust and Weather Proof.**

If you're building, make sure of satisfaction by ordering **EASTLAKES** for the roof—fullest information if you write.

Metallic Roofing Co., Limited,
WHOLESALE MFRS., TORONTO, CANADA.

ness. The American Sheet and Tin Plate Co. this week has 136 of its 163 mills in operation and before the first of the year practically every mill will be on in full. None of the sheet mills are taking business for delivery next year at present prices anticipating an advance to be made in sheet bars next week.

Merchant Steel—Contracts for merchant steel for delivery the first half of the year are now being placed, while the current tonnage is unusually heavy. A meeting of the shafting manufacturers will be held in New York on Thursday, but no change in prices is anticipated.

LONDON METAL MARKETS.

From Metal Market Report, Dec. 14, 1904.

Tin—Spot tin opened firm at £134 12s 6d, futures at £130 10s, and after sales of 150 tons of spot and 80 tons of futures closed firm at £136 for spot and £130 5s for futures, making price as compared with yesterday £3 10 higher on spot and 5s higher on futures.

Copper—Spot copper opened firm at £66, futures at £66 7s 6d, and after sales of 300 tons of spot and 200 tons of futures closed steady at £66 for spot and £66 5s for futures, making price as compared with yesterday unchanged on spot and unchanged on futures.

Lead—The market closed at £12 17s 6d, making price as compared with yesterday unchanged.

Spelter—The market closed at £25, making price as compared with yesterday 2s 6d higher.

Mr. Norman Duperow, one of the Canadian representatives of Wm. Harland & Son, of Merton, Surrey, England, has been appointed United States manager of the same firm, and will leave for his headquarters in New York on the first of January.

HARDWARE CONDITIONS IN MANITOBA.

(Market quotations corrected by telegraph up till 12 a.m. Friday, Dec. 16, 1904.)

Office of HARDWARE AND METAL
Room 515 McIntyre Block,
Winnipeg, Man.

WHOLESALE hardware business is of seasonable character and proportions, a statement which at this time of year may be taken to mean that trade is not very brisk. The holiday season is never the best in the hardware trade, and this year has been no exception to the general rule. Jobbing houses are now making preparations for stock taking, and trade is quiet.

Price changes are not numerous, the most important being a general advance in iron pipe over last week's quotations. Window glass continues very firm at the advance quoted last week. The western demand has been very brisk, and promises to continue so, and there may be trouble in filling orders unless the foreign situation is relieved. We quote:

Barbed wire, 100 lb.	\$2 85
Plain galvanized.	6 to 8 3 39
"	9 2 50 2 90
Plain galvanized.	10 3 50
"	12 3 10
"	13 3 20
"	14 3 90
"	15 4 45
"	16 4 60
Plain twist	2 85
Staples.	3 35
Oiled annealed wire.	10 2 86
"	11 2 92
"	12 3 00
"	13 3 10
"	14 3 20
"	15 3 25
Annealed wires (uncoiled) 10c. less.	
Horseshoes, iron, No. 0 to No. 1.	\$4 55
No. 2 and larger	4 30
Snow shoes, No. 0 to No. 1.	4 80
No. 2 and larger	4 55
Steel, No. 0 to No. 1.	4 70
No. 2 and larger	4 45
Horsenails, No. 4—1 1/2 in., list price	0 48
" 5—2 "	0 32
" 6—2 1/2 "	0 28
" 7—2 1/2 "	0 24
" 8—2 3/8 "	0 22
" 9—2 1/2 "	0 20
" 10—2 1/2 "	0 20
" 11—2 1/2 "	0 20
" 12—2 1/2 "	0 20
" 14—3 1/2 "	0 20

Discounts on these prices are for "C" brand 40, 10 and 7 1/2 per cent., for other brands 55 and 60 per cent. Add 15c. per box.

Cut Nails—	Wire Nails—
2d 1 in.	\$4 00
3d Fin. 1 1/2 in.	4 00
3d 1 1/2 in.	3 65
4d 1 1/2 in.	3 40
5d 1 1/2 in.	3 40
6d 2 in.	3 30
8d 2 1/2 in.	3 15
10d 3 in.	3 10
20d 4 in.	3 05
30d 4 1/2 in.	3 00
40d 5 in.	3 00
50d 5 1/2 in.	3 00
60d 6 in.	3 00
Bar iron (basis)	2 50
Swedish iron (basis)	4 75
Sleigh shoe steel	2 65
Spring steel	3 00
Machinery steel	3 50
Tool steel, Black Diamond, 100 lb.	9 50
Jessop	13 00

Black Sheets, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge	3 75
24 gauge	3 90
26 gauge	4 00
28 gauge	4 10
Galvanized sheets—	
Apollo, 16 gauge	4 00
18 and 20 gauge	4 00
22 and 24 gauge	4 25
28 gauge	4 50
30 gauge or 10 1/2 oz.	4 75
Queen's Head, 24 gauge	4 25
26 gauge	4 50
28	4 75
Genuine Russian, per lb.	11
Imitation	07
Tinned, 24 gauge, 100 lb	8 00
26 gauge	8 05
Tinplate, 1C charcoal, 20 x 28, box	9 50
" IX	11 50
" IXX	13 50
Ingot tin.	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.	3 75
Sheet zinc, cask lots, 100 lb	8 25
Broken lots	8 00 8 75
Pig lead, 100 lb.	4 50
Black iron pipe, 1/2 inch	2 45
" 3/4 "	2 65
" 1 "	3 00
" 1 1/4 "	3 80
" 1 1/2 "	5 50
" 2 "	7 45
Rope, sisal, 7-16 and larger, basis.	8 95
Manila, 7-16 and larger, basis.	12 30
Lath yarn	10 75
Solder	15 25
Axes, chopping	11 25
" double bits	21
Bluestone	\$ 6 75 to 12 00
Screws, flat head, iron, bright.	12 00 to 18 00
Round "	5 25
Flat " brass	80 p.c.
Round " "	75 and 10 p.c.
Coach " "	70 and 10 p.c.
Bolts, carriage, 1/2 or smaller	70 p.c.
" 7-16 and up	60 and 5 p.c.
Bolts, machine, 1/2 and under	55 p.c.
" 7-16 and over	55 p.c.
Bolts, tire	65 p.c.
Bolt ends	55 p.c.
Sleigh shoe bolts	65 and 10 p.c.
Machine screws	70 p.c.
Plough bolts	55 p.c.
Square nuts, case lots	3c. discount.
" small lots	2 1/2 c.
Hex " case lots	3c. "
" smaller lots	2 1/2 c.
Rivets, iron	50 and 10 p.c.
Copper, No. 8	32 1/2
No. 12	37 1/2
Coil chain, 3-16 inch	9 25
" 1/2 inch	7 25
" 5-16 inch	5 20
" 3/4 inch	4 60
" 7-16 inch	4 45
" 1/2 inch	4 30
" 3/4 inch	4 10
" 1 inch	4 30
Spades and shovels	40 and 5 p.c.
Harvest tools	60 p.c.
Axe handles, turned, s.g. hickory, doz.	\$3 15
No. 1	1 90
No. 2	1 60
Octagon extra	2 30
No. 1	1 60
Files:	
" Arcade "	70 and 10 p.c.
" Black Diamond "	60 p.c.
" Nicholson's "	62 1/2 p.c.
Building paper:	
Anchor, plain	65c.
" tarred	70c.
Pure fibre, plain	67 1/2 c.
" tarred	80c.
Ammunition, cartridges, Dominion R.F.	52 1/2 p.c.
Dominion, C.F., pistol	30 p.c.
" military	15 p.c.

Ammunition, cartridges, American R.F. 93 1/2 p.c.
C.F. pistol..... 5 p.c.
C.F. military..... 10 p.c. advance.
Loaded shells:

Eley's and Kynoch's soft, 12 gauge	
black	15 00
chilled, 12 gauge	16 00
soft, 10 gauge	18 00
chilled, 10 gauge	19 00
Shot, Ordinary, per 100 lb	6 00
Chilled	6 50
Powder, F.F., keg, Hamilton	4 75
F.F.G., Dupont's	5 00
Tinware, pressed, returned.	70 and 10 p.c.
" plain	75 and 2 1/2 p.c.
" pieced	30 p.c.
Japanned ware	37 1/2 p.c.
Enamelled ware, white	45 p.c.
" Famous	50 p.c.
" Imperial	50 and 10 p.c.
Green Wire Cloth	1 55

PETROLEUM.

Silver Star, per gal.	27 1/2 c.
Sunlight	23 1/2 c.
Eocene	25 1/2 c.
Pennoline	26c.
Crystal Spray	25c.
Silver Light	23c.
(In barrels f.o.b. Winnipeg.)	

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap	5
Copper (heavy)	8 1/2 c. per lb.
Yellow brass (heavy)	7 1/2 c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead	2c. to 2 1/2 c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead (pure)	\$5 00 to \$5 50
Putty in bladder, 2 1/2 lb., in 100 lbs. keg.	0 2 1/2 to 0 2 3/4
Turpentine, pure in barrels	\$ 0 87
Less than barrel lots	0 92
Linseed oil, raw	0 55
Boiled	0 58
Lubricating oils, heavy castor machine	0 26 1/2
" " extra engine	0 27
" " dynamo	0 38
" " back	0 22
" " cylinder	\$0 50 to 0 80
(as to quality)	
Harness oil	0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00 1/2
" 2nd pressure	1 09 1/2

WINDOW GLASS.

16-oz. O.G., single, in 50-ft. boxes—	
16 to 25 united inches	\$2 25
26 to 40 "	2 50
16-oz. O.G., single, in 100-ft. cases—	
16 to 25 united inches	4 00
26 to 40 "	4 25
41 to 50 "	4 75
51 to 60 "	5 25
61 to 70 "	5 75
21-oz. C.S., double, in 100-ft. cases—	
26 to 40 united inches	6 30
41 to 50 "	7 35
51 to 60 "	8 40
61 to 70 "	9 45
71 to 80 "	10 50
81 to 85 "	11 55
86 to 90 "	12 60
91 to 95 "	14 70
96 to 100 "	17 35

NOTES.

Mr. C. A. Baskerville, one of the oldest and most widely known of the retail hardwaremen of Winnipeg, enjoyed a hunting trip last week in Southern Manitoba.

Mr. A. C. Morris, auditor of the Ontario Wind Engine and Pump Co., who has been in Winnipeg for some time auditing the books of the local branch, returned to the east last week.

Mr. H. C. Martin, of H. S. Howland, Sons & Co., Toronto, who has been in Winnipeg for some time, returned east last week.

Mr. T. N. Nevin, of Marshall Wells

Co., is spending a month's vacation in Montreal.

Mr. D. L. McGibbon, of Montreal, general manager of the Canadian Rubber Co., was a guest at the Mariaggi last week, while making a short stay in Winnipeg en route for Vancouver. Mr. McGibbon says that the rubber market is disturbed at present owing to the high price of crude rubber, which has advanced to a figure higher than has been reached in 20 years. The price per lb. is now \$1.33, as compared with \$1 a year ago, while for the 18 years previous the average price was about 70c. The supply is rapidly decreasing, and the crude rubber market is at present in a critical state.

NEW CUSTOMS REGULATIONS.

The Department of Customs, Ottawa, last week issued a circular advising collectors that the free entry of catalogues and price lists is to apply when they are imported for wholesale purposes only. These would usually be addressed to dealers or traders. Duty at the rate of 15 cents per pound under tariff item 120 is to be collected on circulars, fly sheets and other advertising matter (except catalogues and price lists for wholesale only), when imported by mail addressed to individuals or otherwise. The distribution of advertising matter being ordinarily of interest to the sender, collectors are advised in respect of quantities of advertising matter, weighing over one pound in the aggregate from the same exporter, that they may notify the sender as to the amount of duty payable thereon and state that the advertising matter will be forwarded as addressed on prompt remittance of duty. When the duty remains unpaid for sixty days, the matter is to be treated as unclaimed and a special notation made thereof without entry on the usual "unclaimed list of uncustomed goods." At the expiration of six months the inspector may direct the matter to be destroyed in default of payment of duty, if the same cannot be sold for a sufficient sum to pay duty and charges as provided in section 37 of the Customs Act.

A NEW FIRM.

The Ontario Mining and Smelting Co., of Bannockburn, Ont., will be in the market for red brick, firebrick, fireclay, lumber, roofing material, wrought iron pipe, gasoline and oil engines and furnace castings, also lime and cement. Manufacturers would do well to send this company their catalogues and price lists.

TRADE INQUIRY FROM SWEDEN.

A Swedish firm have sent in an inquiry asking if there are any buyers in Canada of Swedish pig iron, blooms and rough bars.

GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, Montreal.

YES! SHOOT REAL CARTRIDGES

CARTRIDGE



Smallest Pistol
in the World

Beautiful Watch Charms

and Stick Pins

PERFECT WORKING MODELS

Can furnish you with Miniature Pistols and Tools, including Nail Hammers, Ball Pein Hammers, Wrenches, Clamps, Cleavers, Razors, Saws, etc.

Send for Miniature Tool section of the Green Book for illustrations of full line.

SMITH & HEMENWAY CO.

294 BROADWAY, NEW YORK CITY.

DAVISON MFG. CO.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL. ALLEN C. JENKING, Canadian Manager

STERNE'S CEMENT

Ready for use.
Adheres to castings, tin, etc.
Sets in a few hours.
Vitrifies without shrinking.
Non-porous.

Good points, are they not?
Sterne's Cement is the best made.
Money back if it isn't.

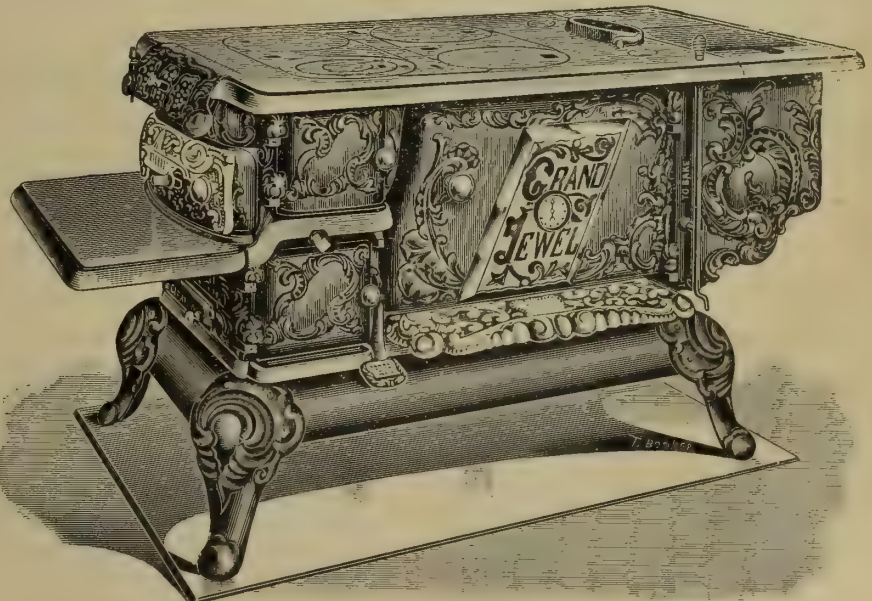
SEND FOR CIRCULAR - OR SAMPLE.

G. F. STERNE & SON, Sole Makers, Brantford, Ont.

J. H. HANSON, 422 St. Paul St., MONTREAL, Eastern Agent.

The Grand Jewel Coal Cook Stove

is a new stove of the very highest class, specially adapted for burning Hard or Soft Coal; can also be used for burning Wood



Two Sizes—Square

Duplex Grate of improved pattern. No space left between grate and fire-box linings, so that no ashes or cinders can pass between or accumulate, so as to interfere with its easy working. One movement of the crank cuts out the dead ashes and cinders and drops them into ash pan.

The Duplex Grate when reversed forms a perfect WOOD fire bottom, and with all the coal linings in position 17 inch wood can be used. Special Wood Linings can be supplied to admit wood 24 inches long.

Two Sizes—with Tank

The Oven is our standard one piece Sheet Steel Oven, same as our Grand Jewel Wood Cook, which has been so wonderfully popular, and successful. This Oven will never warp nor crack. With a Steel Oven much less fuel is expended in getting up a baking heat, and less required to keep the stove running.

The Oven is well ventilated.

Oven Door Thermometer.

Water Front for either size supplied when ordered

Manitoba
Depot

MERRICK, ANDERSON & CO.,

Winnipeg

AN INTERESTING VISITOR.

MR. WILLIAM F. BEARDSHAW, managing director of J. Beardshaw & Sons, Limited, Baltic Steel Works, Sheffield, England, was in Montreal last week and also visited Quebec and St. John, N.B., in connection with his trade.

Mr. Beardshaw is specially interested in the heat treatment of steel, in the manufacture of high speed tool steel and also tools made from high speed tool steel. He has been a member of the Iron and Steel Institute since 1889 and is no stranger to the United States. He attended the meeting in 1890.

Local honors have fallen thick upon him. He was president of the Sheffield Chamber of Commerce and Manufacturers in 1901, 1902 and 1903. He also attended the congress of Chambers of Commerce of the British Empire held in Montreal last year. Like his other colleagues, he is a magistrate for the city of Sheffield.

The firm of J. Beardshaw & Sons, Limited, are makers of the "Conqueror" brand of high speed tool steel, the introduction of which into the United States has been so satisfactory, it having been shown in comparative tests to give better results than any other high speed steel now on the market. Mr. W. F. Beardshaw has found it necessary to visit the United States to complete arrangements with the firm who are putting it on the United States market. Being in the United States he came on to Montreal to visit their Canadian agent, Mr. Alex. Gibb, who has been looking after their interests for several years. While in Montreal Mr. Beardshaw called on some of the principal users of high speed steels, and as a result the prospects for the "Conqueror" brand making an equally good showing in Canada are good, and it is their intention to push the sale of this brand in the future more than they have done.

The firm of J. Beardshaw & Son, Limited, roll this high speed steel in special shapes, known as "Profile" tool steel, which has a very large sale in England and the Continent. This steel is rolled in twist, star, three wing, fluted, vee and double profile shapes, and with these nearly all tools can be made without forging the bars. The price of the "Profile" steel is only a little more than the ordinary round, square or octagon shapes, but to demonstrate that notwithstanding the steel may cost a little more per cwt. it must show a considerable saving in the tool steel account to all

important consumers. Thus in order to make a rimer 1 1/4 in. diameter by 10 in. long, either a piece of 1 1/4 in. round steel, weighing 57 oz. must be used, or a piece of star profile of the same diameter, but weighing only 34 oz.; and to make a twist drill 1 3/8 in. in diameter by 18 in. long, either a piece of 1 3/8 in. round steel weighing 117 oz. must be used, or a piece of twist profile of same diameter, but only weighing 49 oz.

These examples show that profile steel is 45 to 55 per cent. lighter than corresponding sizes of ordinary tool steel, and even if the price be a little higher, it shows a very considerable saving to the consumer. The advantage of profile steel is not merely limited to saving in first cost, which is perhaps the least of the advantages it offers.

When the pieces of ordinary steel for making a rimer, a drill or a turning tool have been cut, it is necessary to mill or forge the pieces in order to give them the necessary shapes to transform them into the desired tools. With profile steel nothing of the kind is necessary; the drills and rimers are already milled out in the rolling, and there is no employment of tools or loss of labor in order to bring them into shape. For turning tools the shape is given in the rolling and a simple grinding suffices to give the point of the tool its desired cutting edge. With the advantages it offers there should be a large demand for profile steel, in high speed quality especially.

INQUIRIES FOR CANADIAN TRADE.

The names and addresses of the firms making the following inquiries may be had by application to the Department of Trade and Commerce, Ottawa, or to the Editor of this paper. Parties answering inquiries will be careful to mention the office under which said inquiry appears and the number.

The following inquiries concerning Canadian trade have been received from the High Commissioner for Canada:

168. Inquiry has been made for the addresses of Canadian manufacturers of wooden handles—shovel, pick, fork, etc.

170. Inquiry is made regarding mica and asbestos deposits in Canada and for names of owners of such properties.

173. The English agency is required for Canadian sole and upper leather by a person who will be visiting Canada in the early part of next year.

The following inquiries have been received from Birmingham, England:

96. A firm in Great Britain wishes to get in touch with a firm in Canada who can ship elm or other wood for machine made coffins.

97. A commission firm in the Mid-

lands wishes to secure an agency for the sale of Canadian machinery.

99. A Birmingham firm inquires for a firm in Canada who can supply them with mica.

100. A large firm in Birmingham wishes to place their motor accessories in Canada. Would consider the appointment of an agent.

103. A firm in the Midlands wishes to represent a large manufacturer of office specialties.

105. A very large firm in the Midlands wishes to find a market in Canada for their brass curbs, fenders, fire irons, etc. Would appoint an agent.

108. A commission agent in the Midland wants an agency for upholsterers' leather, and motor car leather.

The following inquiries for Canadian trade have been received from the Curator, Canadian section, Imperial Institute, London, England:

109. A Liverpool firm would advantageously handle the agency of a first-class Canadian shipper of hard wood, wishing to develop export trade.

110. A manufacturer of special improved wire for pianofortes seeks the services of a suitable Canadian resident agent to take up sale of same.

A 1905 CALENDAR.

The B. Greening Wire Co., Hamilton, Ont., have once more issued their annual calendar. They have retained all the notable features of the past calendars, which are so well known to the trade, and the only alteration is in the design of the heading, necessitated owing to the addition to the plant, which now occupies half a block on both sides of Queen street between Peter and Napier streets. The pad is large, the lettering and figures being quite legible. On the bottom of each sheet of the pad are illustrations of a number of their manufactured wares. This calendar will be given away free upon request to readers of Hardware and Metal.

A BEAUTIFUL CALENDAR.

The Paterson Mfg. Co., of Toronto and Montreal, manufacturers of roofing felts and building papers, are busily engaged this week sending out to their customers their annual calendar of 1905. The subject of the design is the head of a girl with a young kitten on her shoulders. The picture is beautifully colored and makes a very attractive appearance. The pad is large; the lettering and figures are done in two colors. This calendar will be given away free upon request of readers of Hardware and Metal.

Trade Conditions in Birmingham

By H. B.

NOT content with dumping their superfluous manufactures on our shores, the Americans sent us the tail end of their New York blizzard. It caught us at a time when we were receiving accounts of apple trees in their second blossom, and north of England gardens bright with flowers—extraordinary evidence of the mildness of the late Autumn. It snowed up trains in the north country, brought outdoor work in the Midlands to a standstill and materially interfered with traffic. But what is more to the point it disclosed the large numbers of our unemployed, and the large amount of distress prevalent amongst the working classes. Relief funds have been started throughout the district and locally many thousands of pounds have been raised, while subscriptions continue to pour in. At many of our large works hands in employment have arranged to contribute weekly towards the support of their less fortunate brethren.

For several years Birmingham has been expectant in regard to its new water supply. At an estimated cost of £6,600,000 it was decided to acquire some 70,000 square miles of moor land in Wales, about 80 miles west of Birmingham, from which to obtain water to meet the ever increasing demands of the city and neighborhood. The original estimate has long been exceeded, but lately Birmingham has got the new water. The old supply was largely charged with lime, which, though it caused manufacturers much trouble by encrusting their boilers, tended to preserve them. The new water is soft and disolvent, and we are told will play havoc with boilers, not only of the larger sort, but also those which are placed behind the kitchen ranges of all decent sized houses. In three years' time, it is said, all these must be replaced by copper boilers, which should undoubtedly give a big impetus to the trade of local copper-smiths. For there are not only the 500,000 inhabitants of the city to be supplied with new boilers, but other towns to be considered, that have acquired rights to draw upon Birmingham's water supply.

While money is decidedly tight the buoyancy of the money market, and the

gradual rise in securities, shows that where investments are promising money is forthcoming. So far as trade generally is concerned, however, we may fairly be said to be "dealing in futures." While the home market remains depressed, the export trade has a far more hopeful tone. But looking carefully over the report from various trade centres, it does not appear that any decided movement for the better is yet to be noted. Some of the large engineering firms are busy with irrigation work, and electrical generating machinery for export, but taking the smaller trades, although there is a certain improvement in some of them it may be assumed this is principally due to the coming of Christmas, and the demand which always precedes the festive season.

Wolverhampton, the home of edge tools, hollow-ware, iron roofing, constructive iron work, and fencing, is only partially employed. There is an increased demand from South America for plantation hoes and other implements, and some good orders have been received from Australia and New Zealand. Engineers are busy on special lines, principally bridge and constructive work, and there is a demand for locks of the better class, and the usual Winter demand for galvanized and enamelled domestic ware, is finding employment for a fair number of hands. But there is no pressure, nor is there full time at all the works.

Generally speaking it is satisfactory to observe that orders for steel bars, which last year went to Germany and the United States, are this year being secured by our home makers. The present tendency of prices for Welsh and North of England steel is upward, and pig iron has moved in sympathy with this market. Sheets are also in demand, and galvanized material is firmer. In all departments the iron trade displays some improvement, but whether this is an indication of the commencement of a general movement, it is premature to say.

Mr. P. B. Ball, the Canadian Government's Birmingham agent, is now visiting Canada. His return is expected on or about New Year's day. Meantime Mr. Ball's Birmingham address has been changed to Rooms 49 and 50 Central House, New street. Canadians who remember Christ Church, which faced the Town Hall and abutted upon what is now Victoria square, will identify the spot, for Mr. Ball's handsome new offices are situated in a very fine block of new building which occupies the site of the demolished church.

Business Men in Parliament

A. E. Kemp, M.P. elect for East Toronto.

A. E. KEMP, M.P., who carried East Toronto in the Conservative interest by an overwhelming majority, is of English descent, though born at Clarenceville, Quebec, on August 11, 1858. His grandfather came from Hull, England, settling first in Montreal and then in Toronto. His father was born in Hull.

The member's business career opened in Montreal, when as a boy he entered the firm of Prouse Bros., rising to be cashier. After five years' service, he started into business for himself in the wholesale furnishing line. In 1885 he moved to Toronto and two years later



A. E. Kemp, M.P.

he succeeded to the business of the Dominion Tin and Stamping Works, a manufacturing concern which had started operations in 1866. Mr. Kemp has had remarkable success in the industrial world and to-day the firm of A. E. Kemp & Co. is known far and wide, as one of the premier institutions of Canada. Over 300 hands are employed and over 2,000 different articles of metal are manufactured.

Mr. Kemp has always taken a prominent position in the business life of his home city. He became a member of the Board of Trade in 1891, and passing through the various stages of office ultimately became president in 1899, holding that important position for two years.

PAINT, OIL AND BRUSH TRADES

Indiarubber Paints.

THE special elastic and durable properties of indiarubber have for long been taken advantage of in the paint manufacturing industry. Most of the existing rubber paints are based on a spirit medium (benzol or the like), in which the rubber is dissolved, forming a tough elastic coating which forms a useful damp-resisting treatment, and is also applicable for other purposes. Raw rubber also dissolves in linseed oil, and several reliable authorities consider that a linseed oil paint containing a small proportion of rubber forms one of the most durable protective paints known. The rubber is shredded, and is placed in carefully selected and tanked Baltic oil in the proportion of two to four ounces per gallon. The whole is allowed to digest at a moderate temperature for a long time, some weeks being allowed to elapse, as the process of solution must not be hurried. This rubber solution is then stirred into the thinners used to thin the stiff paint in such proportion as is considered desirable. Practical trials have shown that when the pigmentary base is properly selected and the thinners and driers correctly adjusted a rubber oil paint made in this fashion forms a most excellent protective coating. The oil used in the thinner should consist of a specially prepared manganese boiled oil, which is so made as to render the further addition of driers unnecessary.

Some seven or eight years ago a company was formed on the continent for the purpose of exploiting a brilliant white japan, the most distinctive feature of which was that it contained neither gum nor varnish resin. This material contained a proportion of caoutchouc, and its elasticity and durability have been highly spoken of by continental experts. Under suitable treatment linseed oil can be converted into a substance which in many of its properties closely corresponds to native rubber. This fact is the foundation of the treatment of several important pieces of engineering work in the United States. The process involves pickling to remove rust and give a perfectly clean surface, dipping (whereby the paint is applied in place of the old-fashioned mode of application with a brush), and baking, the process during which the film of linseed oil is completely and perfectly oxidised to "linoxyn," or oil-rubber.—Oil and Colourman's Journal.

Presentation.

Mr. Charles March, who was the first president of the Trades and Labor Congress of Canada, and now fourth vice-president of the International Brotherhood of Painters and Decorators, is in Montreal in the interests of the local union. At Monday night's meeting he was presented with a gold locket, suitably inscribed, as a token of the respect in which he is held by the organized labor movement of the city. Mr.

March has been spending a few weeks in the Maritime Provinces, and is on his way home to Toronto.

Storing of Oils.

THE proposal of the Montreal City Council regarding a new law affecting the storing of explosives called forth a letter from one of the city firms protesting against the move. The communication declared that if a proposed by-law were adopted the firm could not continue to do business in the city.

The letter explains, according to the published reports of the by-law, it prohibits the storing of collodium, ether, phosphorus, and that benzine, kerosene, gasoline, alcohol, can only be stored in quantities not exceeding one hundred gallons, or about two barrels. But a wholesale business could not be conducted in that way. The firm buys a carload of alcohol at a time, and the talk of two barrels was absurd. The letter goes on to say that the insurance companies allow the storage of twenty barrels of spirits of turpentine, three barrels of petroleum oil, and a hundred barrels of phosphorus in water, with no restriction whatever on alcohol, collodium or ether.

Surely it was not the desire of the

council to force all wholesale drug houses out of the city. The present firm had been in business since 1800, and had never had any such serious opposition to its trade before. Should the by-law pass in its present form the firm would look to the city for heavy compensation of damages.

Council decided to refer the by-law back to the fire committee for further consideration.

Annual Election of Officers.

The annual election of officers of the Toronto Master House Painters' and Decorators' Association took place in their rooms, in the Temple Building, on December 8, resulting as follows:

President, Frank McCausland; first vice-president, W. J. Bolus, second vice-president, James Phinnemore; secretary-treasurer, Stewart W. Hughes. Executive committee—J. B. Thompson, Chas. Reeve, E. J. Linnington, J. R. Robinson, D. W. Peacock. Representatives to the Federated Building Employers' Association—J. W. Knott, James J. O'Hearn. The election was followed by a paper, and discussion on the apprenticeship question, led by J. M. Faircloth. The feeling prevailed that apprentices should be indentured, and a uniform rate of wages paid.

Compliments of the Season.

A Merry Christmas

and

A Happy New Year

to All.

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED.

TO THE VARNISH BUYER

the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

BERRY BROTHERS, Limited

VARNISH MANUFACTURERS

WALKERVILLE, ONT.

Write for our 100 page illustrated catalogue. Every dealer should have a copy for reference.

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.

Hard work never hurts anyone, and why not work when every effort brings good results?

So far as we are concerned, we find genuine pleasure in stretching every muscle to serve our Linseed Oil Customers as they never have been served by any other firm in the past.

OUR PURE LINSEED OIL

is a winner from the word go. Perfect in body, durability and firmness. Get it and see results.

The Dominion Linseed Oil Co.
Limited

HEAD OFFICE : 34 YONGE ST., TORONTO.

FACTORIES: BADEN, FLORA, GUELPH, OWEN SOUND, ONT.
and 31 Mill Street, MONTREAL, QUE.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, Dec. 16, 1904.

AS is usual in mid-December, there is a lull in shipping operations in the paint and oil departments. A great many travellers are off the road, and sample cases are being overhauled. In the various wholesale houses there is a general brushing up and re-habilitation, which is usual before the Spring campaign opens. Price changes are slight, and scarcely worth reporting.

Turpentine—Single barrels, 78c per gallon; 2 to 4 barrels, 77c per gallon. For smaller quantities than barrels 5c extra per gallon is charged. Standard gallon is 8.6 lbs. The above prices are net thirty days; for longer terms prices are higher.

Linseed Oil—Raw, 1 to 4 barrels, 44c; 5 to 9 barrels, 43c; boiled, 1 to 4 barrels, 47c; 5 to 9 barrels 46c; delivered in Ontario between Montreal and Oshaway at 2c per gallon in advance.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7c; No. 1, 6c; No. 2, 5c.

Putty—Bulk, in barrels, \$1.45; in 25 lb. tins and irons, \$1.85; bladdered putty in barrels, \$1.70.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4.25; in 100 lb. kegs, \$4.50; in less quantities at rate of \$5.50 per 100 lbs. No. 1 red lead casks, \$4.75; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2; flake litharge, casks, \$5; smalls, \$5.50 per 100 lbs.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in whole-sale lots, and 1-2c additional for small lots.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East.

Toronto, Dec. 16, 1904.

OWING to the strong conditions of pig lead wholesale dealers fear an advance in white and red lead and are taking advantage of the situation by purchasing as large a stock as the manufacturers will allow. The manufacturers anticipate an advance, and will not book large orders nor will they

book orders for any future date. Shellac gum is arriving in limited quantities and prices are firm. No import orders for glass are being taken by the wholesale jobbers. Cold weather has effected the trade, the demand being quieter. No advance in price is expected till the opening up of trade next Spring. For the reason that the demand for turpentine declined as soon as the prices advanced last week many dealers believe that the price will take a drop to the former level. Trade in mixed paints is quiet and no change is expected till after the first of the year when the travelers start on the road to book orders. Trade in linseed oil is quiet.

White Lead—Ex-Toronto, pure white lead, \$4.75; No. 1, \$4.30; No. 2 \$4; No. 3, \$3.60; No. 4, \$3.35 in packages of 25 lbs and upwards; 1-2c per lb extra will be charged for 12 1-2 lb packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs, \$4.25; ditto, in kegs of 100 lbs, \$4.50; No. 1, in casks of 500 lbs, \$3.75 to \$4; ditto in kegs of 100 lbs, \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs; Gilders' whiting, 75c.

Shellac—Pure orange in barrels, \$2.75 to \$3; white, \$2.85 to \$3.10 per barrel; No. 1 (orange), \$2.25.

Linseed Oil—Our quotation is: Raw, 1 to 4 barrels, 45c; boiled, 48c; 5 to 9 barrels, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph,

net 30 days. Another quotation is: Raw, 1 to 4 barrels, 45c; boiled, 48c; 5 to 9 barrels, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, 2 per cent. off 30 days; net 30 days to outside points. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 77c; 2 to 4 bbls, 76c, Toronto; 5 bbls and over f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls, 77c; 2 to 4 bbls, 76c, ex Toronto; 5 bbls and over f.o.b. point of shipment, 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Ordinary, bladders in barrels, \$1.65; pure linseed oil, \$2 to \$2.10; bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 8 to 8 1-2c per lb and 9c for single tins.

Glass—See current quotations at the end of this issue.

Window Glass.

MONTREAL.

It is reported that factories in Belgium will not start until January, if they start at all, at which time quotations will be given for Spring glass. The ruling price after that will depend greatly upon the quotations given, and on that market.

WE KNOW A MAN

who stocks a cheap whiting and glue preparation in bulk, and sells it for Jellstone. Jellstone is a superior Kalsomine, licensed to be made under the **Cold Water Patents** of The Alabastine Co., Limited. **It is not sold in bulk to dealers for retail.**

The damage to the manufacturer of a really good article is not measured by the value of the goods so substituted.

CHURCH'S COLD WATER

ALABASTINE

is the acme of perfection for wall decorating, either plain or in relief—**never sold in bulk.**

Alabastine is extensively advertised, known to be reliable, in demand, easy to get, **sure to sell**, and margin of profit to the dealer is perfectly satisfactory. Order through jobber, or direct from

The Alabastine Co., Limited, Paris, Ont.

Impressed on the Memory

There are different ways of impressing things. We make a lasting impression with our

Paints, Oils, Varnishes

We make them always of the very best quality. The result is that when a dealer becomes a distributor of our goods, he makes fast friends among the users of Paints, Oils and Varnishes. This is worth a good deal to him and to us.

STANDARD PAINT & VARNISH CO., Limited, WINDSOR, ONTARIO

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

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GENUINE

PRATTS ASTRAL LAMP OIL

Sold in all countries and recognized as the highest grade oil manufactured.

WHOLESALE ONLY.

THE QUEEN CITY OIL COMPANY, Limited
TORONTO, ONT.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES
MONTREAL.

GLUES

of every kind, and for every purpose. Our glues enjoy large sales in almost all countries of the world, and our brands are generally to be seen amongst good stocks of glues. We believe we are giving better value than any other manufacturer, and we want to submit our lines to the Canadian test. Samples gladly sent in reply to enquiries.

GROVE CHEMICAL CO. Ltd., Appley Bridge, Lancashire, Eng.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO

MONTREAL

LONDON

OTTAWA

WINNIPEG



TWO LEADERS

Island City Aluminum Paint

Island City Gold Paint.

You should have a good stock of these for the holiday season. They are good lines to handle.

P. D. DODS & CO., Montreal  Toronto  Vancouver

?

HARDWARE SALESMEN

are frequently asked at this season: "What shall I buy for a Christmas present?" Hand out something useful. For instance:

A TIN OF THE

C. P. Co.'s Art Enamel

—OR—

HALF A GALLON OF THE

Canada Paint Company's

Floor Paint. (Note: $\frac{1}{2}$ a gallon will paint an ordinary kitchen floor—two coats.)

—OR—

A PINT OF THE

Canada Paint Company's

LIQUID ALUMINUM PAINT.

Just the thing to brighten the home for **CHRISTMAS.**

—OR—

A COUPLE OF BOTTLES OF

Gold Paint

"SUN,"

"ANTIQUE,"

"FAIRY."

All made and guaranteed by

THE
CANADA
PAINT
COMPANY
LIMITED

Some attempt has been made to break the present prices, but owing to the scarcity in this country, they have held very firm, and there is small probability of any reduction, in fact every possibility of an advance. Quotations are: first break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet, \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months; and 3 per cent. discount 30 days.

PETROLEUM.

Refined—Prices are unchanged. Trade is quiet and is expected to remain so during Christmas holidays. We quote: Canadian water white, 17 1-2c; Canadian prime white, 16c; American water white, 18c, ex warehouse.

Crude—Market is steady and prices continue unchanged. Quotations are as follows: Pennsylvania, \$1.60; Corning, \$1.37; Newcastle, \$1.47; North Lima, \$1.07; Tiona, \$1.75; South Lima, \$1.02; Whitehouse, \$1.01; Somerset, \$1.01; Indiana, \$1.02; Canadian, \$1.53.

BUSINESS CHANGES.

ONTARIO.

MACPHERSON & HOVEY CO., manufacturers of threshing machinery, Clinton, are advertising their business for sale.

John Wright, plumber, Toronto, is dead.

G. T. Fennell, plumber, North Bay, has been burned out.

Read & Kilmer, electrical machinery, Hamilton, are moving to Toronto.

A. J. Humphrey, of Humphrey & Wright, builders, London, is dead.

Kerton Bros., blacksmiths, Maxwell, are advertising their business for sale.

E. Nelson, harness merchant, Lawrence Station, has closed up business.

A. Barr, blacksmith and carriage maker, Pembroke, has been burned out.

Geo. L. Allan, hardware merchant, Goderich, has assigned to A. McD. Allan.

J. J. Johnston, dealer in granite and marble, Toronto, has assigned to D. T. McIntosh.

The business of A. W. Kelly, hardware merchant, Collingwood, is advertised for sale.

Guelph Painting and Decorating Co., Guelph, held a meeting of creditors December 16.

Lindsay & McClusky, dealers in coal, wood and cement, North Bay, have suffered loss by fire.

J. Taylor, Chatsworth, has sold his saw mills to W. J. Rhodes and E. Galbraith, of Chatham.

The plant and business of Fader's Screwless Doorknobs, Limited, Orillia, is advertised for sale.

QUEBEC.

S. Paulhus has registered as S. Paulhus, contractor, Montreal.

Paulhus & Vidal, contractors, Montreal, have dissolved partnership.

J. Schwartz, of J. Schwartz & Son, carriage makers, Montreal, is dead.

J. O. Godin, tinsmith, St. Flore, has assigned to Bilodeau & Chalifoux.

The premises of Chas. Lemay, foundryman, Montreal, have been closed.

Henri Gervais has registered with John Galipeau & Cie., plumbers, Montreal.

V. V. A. Rheume has registered as proprietress of O. Papillon & Cie., plumbers, Quebec.

A. Faucher has been appointed curator to A. Desrochers & Cie., lumber merchants, Quebec.

The assets of the Maisonneuve Engine Works, Montreal (Maisonneuve), were sold on December 10.

R. S. P. Smyth has registered as proprietor of R. S. P. Smyth & Cie., lumber and machinery agents, Quebec.

D. R. Wilson and J. A. Wilson have registered under the style of Wilson Bros, tanners, leather and lumber merchants, Farnham.

MANITOBA AND N.W.T.

V. Mitchell, blacksmith, Rosser, is dead.

Grant Hardware Co., Blackfalds, have closed up business.

Holden & Co., lumber dealers, Francis, have sold to D. K. McLeod & Co.

Macdonald & Fleming, hardware merchants, Winnipeg, have been burned out.

Knox Bros. & Fajja, lumber dealers, Gladstone, have assigned to C. H. Newton.

G. H. McGowan, dealer in agricultural implements, Treherne, has sold to B. Wellwood.

F. C. Whitelock, dealer in agricultural implements, Davidson, has sold to Scott & McKelvie.

Ernest S. Harrison Co., dealers in electrical supplies, Winnipeg, held a meeting of creditors December 17.

R. J. McFarlane & Co., dealers in agricultural implements, Arcola, have sold the Stoughton branch to Pollock & Chappel.

BRITISH COLUMBIA.

M. R. Feeney, blacksmith, Grand Forks, has been succeeded by J. L. Simpson.

T. O. Townley has been appointed liquidator to the Richmond Oil Co., Vancouver.

NEW BRUNSWICK.

J. J. Barry, dealer in mill supplies, naval stores, etc., St. John, has assigned to D. Mullin.

MACHINERY

MACHINERY MARKETS.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Dec. 15, 1904.

HOLIDAY seasons and holiday weather, stimulating as they may be in other lines of business, have no beneficial effect on the demand for machinery for installation in mill, machine shop or factory. The only marked activity at present is in the direction of wood working machinery for which the demand seems phenomenal for this season. Manufacturers are laying in considerable stocks of raw material in view of the advancing market, and in many instances are manufacturing largely in anticipation of unusual industrial activity in the Spring. Electrical machinery is in fair demand, with prospects brighter than usual. A few installations are noted.

A notable feature of the machinery market this week has been the unusually large number of inquiries for this season of the year, which, while the present amount of business is not large, is a good omen for the future.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Dec. 16, 1904.

THERE is a bright outlook on this market at present. The present conditions are active, which is not always the case at this time of the year, and indications point to a continuance of these conditions through the usually dull part of the year, the end of the old year and the first few weeks of the new.

The lines of greatest activity are electrical machinery, engines and boilers and wood working machinery. However, there is a very good general demand. Machine tools are receiving some attention, but nothing very marked has been done in this line during the past few weeks.

Levis Electric Co.

The Canadian Electric Light Co., of Quebec and Levis, have recently held a directors' meeting in Quebec, to discuss

future plans for the company. This company operate their plant on the south side of the river, and from the report of the directors appear to be having considerable trouble. Several statements were presented, showing that it was necessary to raise \$25,000 to relieve the company of its present liabilities. A committee was appointed to investigate and to report how the money was to be expended.

Valleyfield Industry.

It is reported on good authority that the industry recently carried on by the Northrop Iron Works, and which has been idle for some time past, is about to be continued by the Fairbanks Co., who have leased, and may ultimately purchase, the plant. The town council at a recent meeting adopted resolutions, which are in part as follows:

"This council is disposed not to enforce against the liquidator of the Northrop Iron Co. its claim for arrears of taxes and bonus during such time as the works are operated and the number of hands employed as provided in by-law 143, and should the Fairbanks Scale Co. purchase and continue to operate the said works and give employment to the necessary number of hands, the City of Valleyfield will deal as fairly and generously with the company as its position will permit."

The re-opening means work for over a hundred skilled artisans.

Machinery and Electrical Notes.

John E. Middleditch, Ridgeway, is erecting a wood working and machine shop.

The Brandon Machine Works, of Brandon, Man., have decided to enlarge their foundry.

It is announced that during the coming Summer the Pintsch Compressing Co. will erect a gas manufacturing plant in Toronto.

The committee in charge of the electric lights at Niagara Falls have decided to change from the 125 cycle to the 25 cycle basis. The change will cost in the neighborhood of \$625.

The Credit River is now being dammed at Erindale, with the view of

supplying to Toronto and Toronto Junction electric power and light. The scheme will cost \$250,000, and when completed will generate from 20,000 to 50,000 horsepower.

It is reported at Quebec that the Department of Marine & Fisheries have under consideration the question of sending the new large ice-breaker, "Montcalm," for a trial trip to Montreal. Her progress will be watched with great interest.

Commencing on the first of December the streets of St. Johns, Quebec, were lighted by the St. Cesaire Light & Power Co. The contract of the company with the corporation is for one year or more, at the discretion of the council, and is for 11 arc lights of 2,000 candle power, at \$55 per annum, and 55 incandescent lamps of 32 candle power at \$10 per annum.

The Ontario Power Co., and the Toronto & Niagara Power Co., who have been busily engaged erecting poles and stretching wires in the vicinity of Niagara Falls, and who have been jealously watching each other's movements for some time past, came into contact the other day. A probable disaster was averted by the chief of police of Niagara Falls advocating settlement with the aid of the courts.

The Springhill Electric Light Co., Springhill, N.B., have installed a new and powerful dynamo, ordered from the General Electric Light Co., of Peterboro, Ont. They have also bought a new 150 horsepower engine made by the Seymour-Mackintosh Co., Auburn, New York. They will also need a new boiler, as a 90 h. p. boiler, which was used with the smaller engine formerly in use, is too small for a 150 h. p. engine.

The old cotton factory at Merritton, near St. Catharines, which has lain idle for thirteen years, has been acquired by the Lincoln Paper Mills Co., of Merritton. They expect to get possession in a few weeks, and will be in the market for a plant to instal in their new mill. The additional factory will enable them to greatly increase their output. It will provide employment for a considerable number of hands, and will naturally be welcomed by the good people of Merritton.

ALTERNATING CURRENT GENERATORS AND MOTORS.

THE development of the line of alternating current apparatus, illustrated, was begun in the early part of 1900, since which time there have been designed and installed nearly one hundred thousand kilowatt capacity of alternating current machinery in competition with older and better known lines of apparatus. The Bullock Electric Co. can point to a large number of installations covering belt, waterwheel and engine driven generators, rotary converters, induction and synchronous motors, and motor generator sets of all capacities and which render eloquent testimony to the value of the apparatus. Among these generators are those near-

chinery on the most modern principles and experience. Thus have been developed the fine narrow armatures with their splendid ventilation, cool operation and graceful outlines, a few views of which are presented.

EFFICIENCY.

By most carefully designing the relative proportions of the armature core slots and pole pieces very high efficiencies result. The 600 k. w. fly-wheel type generators built for the City of Nashville, Tenn., reach an efficiency at full load of 95.5 per cent. while recent 3,000 k. w. generators built and operating at 231 r. p. m. have an efficiency of

tures low and permits large overloads without injury to windings.

OVERLOADS.

As has been remarked in the previous paragraph, the overload margins of these machines, as far as temperature limitations are concerned, is very great, and the machines can stand 50 per cent. overload for a brief period, and momentary overloads of from 75 to 100 per cent. It is desired to call further attention to the fact that all of the machines are designed so that they may carry their full rated kilovolt amperes on a load of any power factor. This is a very important point, as it frequently happens that generators are installed for a power factor of 85 per cent., but have to work on a power factor of 65 per cent., with the result that the machines cannot be utilized to their full capacity on account of the increased inductive drop. These machines are designed to take care of their full rated kilovolt amperes at any power factor.

MECHANICAL CONSTRUCTION.

The armatures are made up of mild annealed steel of high permeability and low hysteresis, the plates being 14 mils thick and carefully japped in order to reduce the eddy currents. They are rigidly held in the armature frame and separated by wide ducts for the purpose of ventilation. The discs are punched with the most modern dies and punches, eliminating burrs on the outside of the punchings, and no filling is necessary in the slots, a process which would produce a large increase in iron losses.

ROTORS.

The rotors of the majority of the standard machines are built of cast steel. The poles are carefully fastened to the steel spider by dove-tailed slots milled into the rim of the steel spiders by strong bolts. The steel spiders are so designed that the mechanical stresses are distributed as uniformly as possible over the section of the spider; in other words they are designed so as to correspond as nearly as possible to a wheel of uniform strength.

ARMATURE COILS.

The armature coils are wound on cast iron formers, a process which enables them to duplicate with the utmost accuracy any armature coils that have been previously built. The armature conductors are carefully insulated from each other, and the insulation between the conductors and the iron is made with special care.

A specialty has been made of armature coils for high potential work, having built units of as small capacity as 200 k. w. for 12,000 and 13,000 volts.



115 K.W., 2-Phase 2,300-V. Bullock belted type alternator.

ly as large as installed at Niagara Falls, and the largest motors of both induction and synchronous types in the world have been built in their shops. These generators are operating the largest and one of the long transmission lines in the world and the largest frequency changes ever built and operated on the longest transmission line east of the Rocky Mountains are those built and installed for the Shawinigan Water & Power Co., of Montreal, whose transmission line is eighty-five miles in length.

Not being handicapped by a large stock of old and antiquated designs and patterns they were in a position to develop a line of alternating current ma-

97.5 per cent., not including friction and windage.

REGULATION.

Good regulation is a subject to which the engineers have given special attention. The most careful designing of magnetic circuit, the proportions and selection of the proper number of armature slots, and the shape of pole pieces have enabled the production of the best regulation obtainable.

TEMPERATURE LIMITS.

The armatures and fields are designed with particular reference to cool operation. The narrow disc-like fields revolving at high peripheral speeds produce a blast of air which keeps the tempera-

Silverware that Sells

After Christmas



The demand for Silverware keeps up—January is, as you know, a great wedding month.

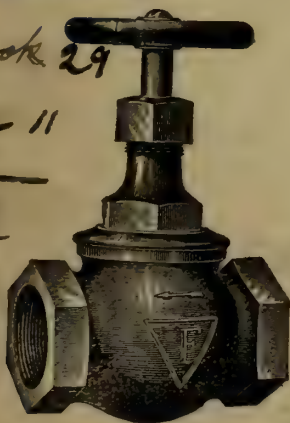
You should sell **STANDARD SILVER**. It is Standard in very truth. It represents the highest known quality of Electro-Plated Silverware. It is guaranteed to be exactly as represented. The Trade Mark is a definite pledge of superiority, of best workmanship, of choiceness of design.

Send for our Catalogue—free.

STANDARD SILVER CO., Limited, Hayter St., TORONTO

Some are Born Great—
Some Achieve Greatness—
Some have Fairbanks Valves Supplied to Them

Having Fairbanks Valves supplied to anyone on an order for Valves is equivalent to having "greatness thrust upon them." If your customer has been having trouble with his Valves and you supply him with "Fairbanks" he will be ever grateful to you as all his Valve troubles will then be at an end. Hardware dealers who sell Fairbanks Valves become as it were partners in our business, a successful and profitable Valve business built on honor, quality and merit. In most of the Valves manufactured to-day many defects are known to exist, but in the manufacture of Fairbanks Renewable Asbestos Disc Valves we claim to have eliminated these defects, and our Valves in actual service will back up our claims. We know what we're talking about. We prove what we say.



THE FAIRBANKS COMPANY

MONTREAL

TORONTO

VANCOUVER

WINNIPEG

Each armature coil is carefully subdivided into individual sections, which are insulated from each other in order to prevent a breakdown of the insulation between layers inside the coil. Owing to this construction there has not been lost a single high potential armature.

FIELD COILS.

The field coils are made of copper strip bent on edge, the turns being carefully insulated from one another. These coils run cool and are practically indestructible. The difference of potential between the turns is but a fraction of a volt, and therefore troubles in regard to insulation are almost impossible.

BRUSH HOLDERS.

The brush holders carrying the current for the excitation are easily accessible, and the carbon brushes can be readily removed. They are so designed that the pressure is as uniform as possible over the surface of the carbons.

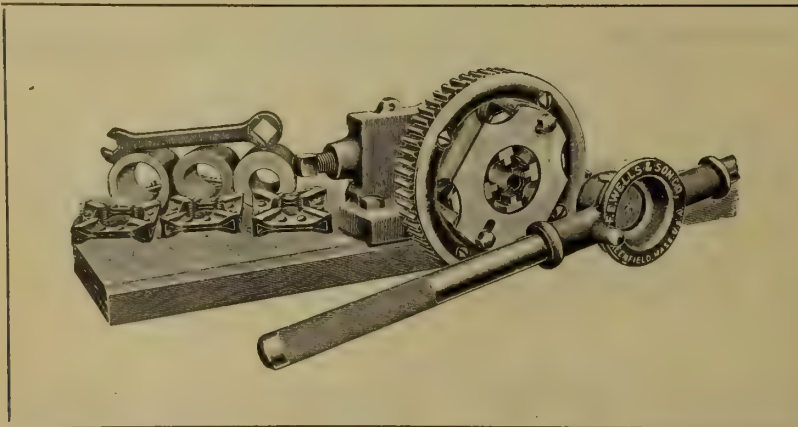
BEARINGS.

All large bearings are of the ball and socket type. They are self-adjusting and self-oiling, and so generously dimensioned that a low temperature is secured. The pedestals are designed with particular attention to large radiating surfaces.

in an ordinary die stock, and is held from turning by two vise jaws on the back of machine operated by set screws. The gears are all machine cut and all castings are of malleable iron to save weight and give ample strength even for the hardest usage. It can be bolted to either a bench or post, and the vice, which is a part of the machine, can be used in place of an ordinary pipe vise. The "Economy" dies, made by F. E. Wells & Son Co., are furnished with the machine, but any standard solid square pipe die will fit. The moderate weight and small amount of work permits its being sold at a low price that every one can afford.

Turbine Efficiency.

It was stated last week in a cable from Scotland that the turbines in the new Allan steamship Victorian had not come up to their requirements regarding speed regulation, and as a result the turbine was not going to be able to work the revolution in marine propulsion that was at first proposed. This statement of non-efficiency has since been denied by the Allan Steamship Co., who have every confidence that the steamship will come up to all requirements. The turbine engines of the Victorian are being constructed by Work-



Wells Pipe Threading Machine.

F. E. WELLS & SON CO., of 51 Riddell street, Greenfield, Mass., are putting on the market a new pipe threading machine, as shown herewith, for threading 1 in. to 2 in. pipe. It is a very simple, compact little machine, weighing about 45 lbs., that is used much like a hand die stock, only having gears to multiply the power so that one man can alone easily thread pipe that usually takes two with a hand stock.

The die is held in the large gear, which has a threaded shank that screws into the main frame and acts as a lead screw to start dies. The pipe is centered by means of bushings, the same as

man & Clark; the builders of the vessel. They are of the Parsons type and are to propel the boat as a speed of 17 knots per hour.

Western Ontario Development.

It is stated on good authority that complete negotiations for the development of the Aitkocan iron range are under way, and that the realization of this industry will practically insure the future of Central Western Ontario. James Hunter, mining promoter, has been in Toronto, and has succeeded in interesting a number of prominent capitalists in the enterprise. A blast furnace is to be built on the Neebing River, between Port Arthur and Fort William, and a spur line will be run from the Canadian Northern to the iron range.

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
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50 " " " 1 year.....	17 00
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SITUATIONS VACANT.

WANTED—Machine hand—young, energetic man preferred, with some knowledge of hardware specialties; must understand the manufacture of dies for stamping steel and other work; if entirely satisfactory, may secure the foremanship of a department; steady employment to competent hand. Apply at once, Box 205, **HARDWARE AND METAL.**

MACHINERY WANTED.

Items under this heading inserted free for readers of **HARDWARE AND METAL.**

WANTED—Second-hand lath machine. Geo. A. Watson, Proton Station.

WANTED—Engine for saw mill—portable preferred, if price be right. Address, Postoffice Box 98, Tavistock.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

BOILER FOR SALE—60 h.p., second-hand, return tubular boiler, good as new; bargain. Address Box 41, **HARDWARE AND METAL.**

FOR SALE—Boiler, tubular, horizontal, double rivetted, 65 h.p.; also 50 h.p. MacDougall engine. Jas. Lafleur, Rigaud, Que.

FOR SALE—Eclipse improved gasoline engines, stationary, marine and automobile; all sizes; the best engine made; manufactured by D. McKenzie & Co., London, Ont.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, **HARDWARE AND METAL, Montreal.**

GAS AND GASOLINE ENGINES—None better; write for prices and particulars. Tuerk Iron Works, Berlin.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.

STEEL CASTINGS—Equal to any foreign made ones, can be had from the Wm. Kennedy & Sons, Limited, Owen Sound.

TUBULAR BOILERS—A large number of first-class second-hand tubular boilers of all sizes or sale by the Polson Iron Works, Toronto.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

WORK AND PRICES RIGHT
GALVANIZING ONT. WIND
 ENGINE & PUMP CO. TORONTO, ONT. LIMITED.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export. With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— "Machinery," Newport. Emlyn Engineering Works NEWPORT, MON., ENGLAND

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STREET PAVING and SIDEWALKS a SPECIALTY

SILICA BARYTIC STONE CO.

OF ONTARIO, Limited

Head Office:

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Water Proof Floors for
 Malt Houses, Breweries,
 Slaughter Houses,
 Cheese Factories, Cellar,
 Stable Floors, etc.

Walter Mills, General Manager
 Ask for quotations for
 Septic Tanks.

"MAPLE LEAF"

Stitched Cotton Duck Belting



MADE IN CANADA

MADE IN CANADA

"Maple Leaf" is made of the best cotton duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.

"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying

Main Drive Belts a specialty.

Ask for "Maple Leaf" and take no other.

Beware of Imitations

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY

HAMILTON, ONTARIO. Limited

Use our "MAPLE LEAF" Belt Dressing.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER.

We have arranged to carry a large stock of Square and Hex Cap Screws, Square Set Screws, Bright Bolts, Washers, etc., in Canada, and can deliver from Canadian stock after February 1st., 1905. It will pay you, if you are a buyer of these goods, to get in touch with us.

Temporary Offices

25 Queen City Chambers, Church St., TORONTO.

Clauss Brand TAILORS' Shears

Fully Warranted

These goods are the BEST and are EQUALLED only by such other goods as are manufactured by



Write for Trade Discount.

CLAUSS SHEAR CO., 169 Spadina Ave., Toronto, Ont.

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
 Steel and Twist Barrels

Superior in Design, Workmanship
 and Finish, and the most popular
 Gun on the Market.

Simplest
 "Take Down"
 Gun Made



HARRINGTON & RICHARDSON ARMS CO.

Also makers of H. & R. Revolvers.

Catalog on request. Worcester, Mass., U.S.A.

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 STAR
 SPECIAL
 HERCULES
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QUALITY & PRICE TO SUIT
 ALL GRADES OF WORK

THE CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.

Cap Screws, Set Screws,
 Machine Screws,
 Cold Pressed Nuts,
 Studs, Coupling Bolts,
 SPECIAL MILLED WORK, Etc.

CANADA FOUNDRY CO., Limited

Head Office and Works; TORONTO, ONT.

DISTRICT OFFICES,

MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
 CALGARY, VANCOUVER, ROSSLAND,



GRAND IDEA

"The Range that Never Fails."

The amount of business you transact in a year is largely governed by the quality of the articles you offer for sale.

Take, for instance, the stove trade: If you sell a customer a poor article in this line, it will come back at you every day the stove is in use. On the other hand, if you sell a thoroughly reliable article, it acts as a silent salesman in your behalf."

We guarantee our **GRAND IDEA RANGE** to be one in which you can place explicit confidence, a range which you can sell, and never be in doubt as to the results.

If you want to increase your stove business next year, order forward a sample of this renowned range now.

We shall be pleased to mail price-list and descriptive literature upon request.

GUELPH FOUNDRY CO., LIMITED
GUELPH, Ont.

WESTERN REPRESENTATIVES—
MESSRS. E. G. LOW & CO., Market St., Winnipeg

EASTERN REPRESENTATIVE—
EUGENE PANNETON
1588 Notre Dame Street, - Montreal, Quebec



You cannot grow oaks from dandelion seed, nor can you build a successful business with poor goods. If you are in the stove business you should sell the

Imperial Oxford Range

It has a reputation that will build business for you. Every one you sell will do missionary work for your store—bring you in more business.

Write us for particulars about the agency for your district.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., Limited
CALGARY, ALTA.

STOVES AND TINWARE

HOW TIN AND TERNE PLATES ARE MADE.

By W. R. Stewart in Cosmopolitan.

TIN—or more properly speaking, tinned—plates are thin sheets of steel or iron which have been coated with tin by being dipped in a bath of molten metal. The affinity of iron and oxygen, which causes the former to rust, is the necessity for the tinning operation, tin being a metal which is not perceptibly corroded by air or weak acids. Tinned plates are largely employed in the manufacture of household utensils, for cans for preserving fruits, vegetables, meats, fish, etc., and for pharmaceutical apparatus. The use of all-tin articles would be impracticable, because of the comparatively high cost of pure tin and because the metal has not sufficient stability.

Terne plates, which are used wholly for roofing purposes, are also thin sheets of steel or iron, but their coating comprises an alloy of tin and lead instead of tin alone. The proportion is generally from 15 to 30 per cent. of tin, according to the grade of plates to be made; the greater the proportion of tin, the higher being the price of the finished goods. Terne plates are much duller in appearance than tin plates, on account of the lead used in the bath. They derive their name from the French word "terne," which means dull.

LABOR SAVING DEVICES

The lapse of centuries has seen little change in the actual process of tinning, but the invention of many labor-saving devices has greatly altered the manner in which the process is carried out. In early times the thin sheets of iron—"black plates" is the technical name—which are dipped into molten tin to form tinware, were hammered out laboriously on an anvil. A little later, a crocodile or tilt-hammer eased the manual labor of the blacksmith, and in the early part of the 18th century the process of rolling sheets was invented in England. By the roller, sheets of more uniform thickness were produced than under the hammer, and the cost also was greatly reduced. Many improvements in rolling methods have recently been introduced,

and soft steel instead of wrought iron is now generally used as the basis of tinware.

Working on double and triple turn, employing two and three sets of skilled workmen, the tin-dipping and plate-rolling plants hardly see an idle moment. More than a thousand men are employed in some of the larger establishments and the testing of new methods and experimenting with new machinery form an important part of the work of corps of specialists.

MAKING BLACK PLATES.

In the manufacture of black plates as now carried on, steel billets are placed in a heating furnace and subjected to a welding heat. They are then rolled, in grooved rolls, into long flat bars, anywhere from six to twelve inches wide and from three-eighths of an inch to an inch thick, according to the desired size of the plates. The bars are next cut into pieces about as long as will be the width of the finished plates, and are again heated in specially constructed furnaces. Two of these short, cut bars are then rolled sidewise, one after the other, until they are of the required length. They are next matched, put back into a different furnace, and after a second heating are once more rolled, doubled, returned to the furnace, and, after a third heating, withdrawn, rolled again and doubled again. The packs, now in eight thicknesses, are heated for a fourth time and are then rolled out to the required size and the rough edges cut off with mechanical shears. The packs are then cut into two or four pieces, or otherwise, according to the dimensions desired, and the eight layers are separated from one another. Thirty-two pieces of plate thus are obtained from the two pieces of bar steel.

THE PICKLING PROCESS.

After being separated, the plates are sent to the pickling room to be cleared of the scale formed during heating and rolling and otherwise to prepare them for the dipping-pots. The various pickling processes, it may be mentioned, through which the black plates pass,

cause a loss in weight of about four per cent. The first operation of pickling, called black pickling, is accomplished by immersing the black plates in diluted sulphuric acid, heating and afterwards washing in water. Ingenious pickling-machines are now used, the plates being placed in a cradle which revolves by steam or hydraulic power in a tank in such a manner as to cause the pickling liquid to rush back and forth between them. From the acid-tank, the cradle is lifted and dropped into the water-tank where it is caused to revolve similarly. After the first pickling, the plates are given their first annealing, this being the process of heating and cooling the substance evenly in order to give it uniform strength. For this operation the plates are packed in iron stands, covered with iron boxes and run into an annealing-furnace, where they are kept at a red heat until they are thoroughly softened. They are then taken out, the closed boxes being allowed to cool before being opened.

After this first annealing, the plates are "cold-rolled," that is, passed through rollers while in a cold state. This is done in order to give them a perfectly flat set and a polished surface. From the cold-rolling department the plates return to the annealing-room where they are annealed again, but this time at a considerably lower temperature. They then are pickled in the same manner as at the commencement of the operation, only that the pickling solution is much weaker. The plates are now ready for tinning, and are placed in a trough of clean water to prevent re-oxidation while waiting for their hot bath.

(To be concluded.)

Stove Trade and Catalogue House Dealers.

A WRITER in the Metal Worker gives the stove trade some pointers on catalogue house competition as follows: Some dealers of late years, particularly those in the stove line, have complained of catalogue house competition. This competition, I think, is entirely overrated, for if a proper course is pursued little or no trouble will



Ask Your Jobber
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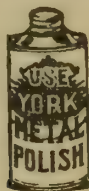
and secure the low price which will hold only for a few weeks. Test our stove pipe.

It has no Equal.

We are then sure you will handle no other make.

St. Arnaud Freres

425 St. Paul St., MONTREAL



YORK METAL POLISH
(Liquid or Paste.)

is matchless for giving a quick, lasting and brilliant polish to all metal surfaces capable of taking a polish.

Order from your jobber.

Sample tin free.

Anglo-Canadian Supply Co.

29 Church-St., Toronto.

OAKEY'S

The original and only Genuine
Preparation for Cleaning Cutlery. 6d. and 1s. Canisters

'WELLINGTON'

KNIFE POLISH

JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and
Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

**JOHN FORMAN, 644 Craig Street
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**WORKERS in
BRASS and COPPER**

You often want Tubing, Sheets
or Rods of special sizes—We serve
these needs, quickly, cheaply.

Write us about it.

The Booth Copper Co.,

LIMITED,

119-123 Queen St. East,
TORONTO.

be experienced from catalogue houses. By visiting the local freight station and observing to whom the shipments are sent, and following this up with a pleasant personal interview with the consignee, in which information can be conveyed as to the completeness of stock on his floor, the tradesman will usually be able to convince people of the folly of sending 1,500 miles away to procure an article which can be bought as cheaply in their home town. Where the competition is very severe, some merchants have made it a rule to buy a stove or two from the catalogue house and set it on the floor alongside of their own goods, the price of both being marked in plain figures. As seeing is believing, this will convince many people of the superiority of home goods and the advantage to themselves of buying from local merchants. While it is my business to sell all the goods I can, I find many dealers clinging to the old-fashioned idea of buying in large quantities in order to save an extra 5 per cent. They seem to cling to the old idea of going to the jobbing centre once or twice a year and buying enough goods to last through the season. This is a mistake, for with the modern transportation facilities it is much to the advantage of the tradesman to allow the jobber to carry the stock and only to send in orders for such quantities of goods as he may actually need, so keeping stocked in a general way, but never having an excessive amount of stock on hand. The plan of wholesale buying may prove of especial disadvantage to the stove dealer, for he may be overstocked with certain slow selling patterns, while entirely lacking in others that find a more ready sale during the season. The present tendency of stove foundries is to ship promptly, so that most men can receive their goods in from three to five days' time after placing an order; and as many manufacturers allow a rebate on the total amount of business placed during the year, it would seem that there is no argument in favor of buying such commodities in large quantities.

Familiarity With Stoves.

IN selling stoves there are many questions which the merchant is likely to be asked by would-be purchasers. The stove man must always have an answer ready to impress them with the fact that he not only thoroughly knows his business, but is familiar with the stove he is talking about. Questions as

to the amount of coal it will take to heat the back parlor, used three nights a week, and such things as that should always be met with a ready response by the up-to-date dealer. The heating capacity of a 14-inch oak will often come up for consideration, and woe to the luckless dealer who claims more for his stove than it will fulfill in actual service. To every stove dealer we would say: Be sure that all the attachments have been tried to see that they work properly and none of them sticks, and if necessary when the entire family comes around to inspect the thing bring it out on the floor so that all can see it. Open up the doors and show the size of pot, show the new devices to prevent gas escaping into the rooms, and when all this has been gone over and one more stove is added to the list of sales don't forget to sell a stove board and a new Russian iron pipe, for the profit on such things as these will go a long way toward increasing your profits on the sale.

RAILROADS BUYING IDEAL FENCING.

The McGregor-Banwell Fence Co. Limited, of Walkerville, Ont., have received orders for their Ideal woven wire fence from the Canadian Pacific Railway Co., the James Bay Railway Co., the Guelph and Goderich Railway Co., the Canadian Northern Railway Co., and the Middleton and Western Railway Co. Railroads look to permanency and as the Ideal is made of No. 9 hard steel wire throughout it has won favor with people who want a long-lasting fence.

A STRANGE FIND.

When excavating for the foundation for the new wholesale warehouse of Lewis Bros., Montreal, the workmen unearthed several skeletons, which recalls to modern Montreal the historic past. They were discovered at the rear end of the basement at a depth of eight or nine feet below the street level. None of the skulls were found, but otherwise one of the skeletons was fairly complete. Near where these were discovered was a formation believed to be the banks of an old creek which used to run along the present site of Craig street. The ground was clayey, and the diggings showed the perforations or marks of forced vegetation, and in some cases the dried grass itself. The skeletons had probably lain there many generations, and were buried probably long before the existence of Bleury street itself.

A PERMANENT
and Handsome Roof.



Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write to-day.



Solarine Bar Polish

Best and cheapest preparation for polishing:— Brass, Copper, Steel, Tin, Zinc, Bar Fixtures, Kitchen Utensils.

A rapid cleaner expressly designed for all kitchens.

For Ontario, Address

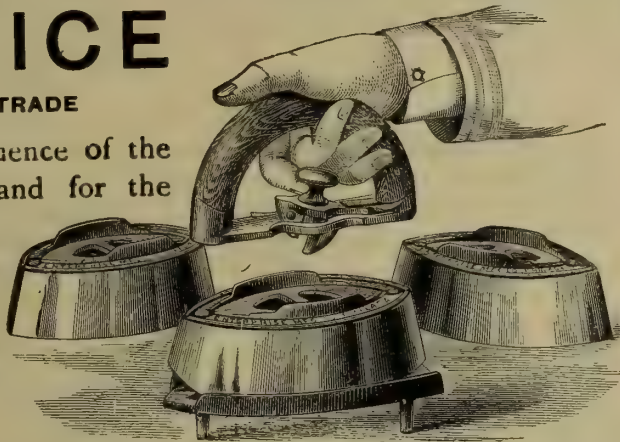
H. F. FALKINER,
60 George St., TORONTO

Mrs. Potts Sad Irons
OLD PATTERN

NOTICE

TO THE TRADE

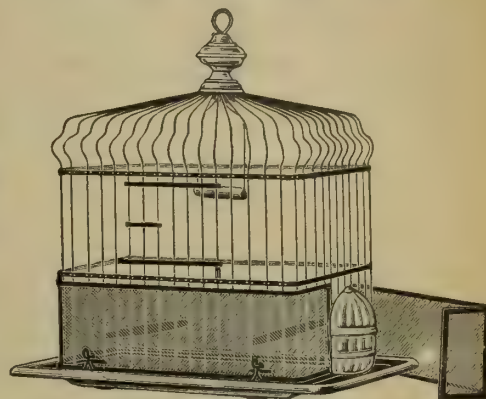
In consequence of the continued demand for the genuine Mrs. Potts Irons, we will accept orders deliverable after Jan'y. 1st next.



Please bear in mind that we use the same grinding machinery as is now being used by the Enterprise Co. of Philadelphia. We claim ours to be the only perfect ground and polished irons on the market.

The H. R. IVES CO., Limited, = Montreal

CAGES



Bird Cages, Japanned and Brass, Parrot Cages, Squirrel and White Rat and Mouse Cages, Breeding Cages. The most complete line of Cages manufactured on this continent. Styles, sizes and prices to suit every purchaser.

E. T. WRIGHT & CO., Manufacturers,
HAMILTON.



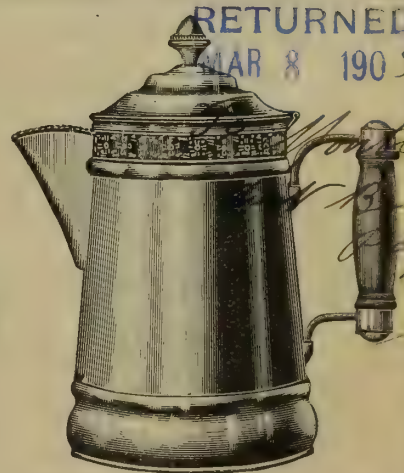
Seasonable Goods

TEA AND COFFEE POTS

NICKEL PLATED. SILVER LINED.

4 SIZES—3, 4, 5 AND 6 PINTS

2 SHAPES—HIGH AND LOW.



Carpet Sweepers
Queen
Pudding Moulds
Japanese Mats
Delft Teapots
Teapot Stands
Tin Toys, etc.

TRAYS

4 SIZES—12, 14, 16 AND 18 INCHES.

3 SHAPES—

SILVER PLATED

ROUND, OVAL AND OBLONG.

ASSORTED DESIGNS

The Thos. Davidson Mfg. Co.
Montreal Limited

Lithographed
Japanned
Pressed and
Plain
Tinware

Sheet Iron and
Steel Ware, etc.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

DURING the shipping season of 1904 the Dominion Iron and Steel Co., Limited, imported to Sydney for the use of its iron and steel plant 290,686 tons of iron ore. Of this amount 222,050 tons, or over three-quarters of the total, came from the company's mines at Wabana, Nfld., 25,050 tons were imported from Carthagena, Spain, 24,650 tons from Sweden and 18,936 tons from the Lake Superior mines.

* * *

The monthly statement issued by the Board of Trade, London, Eng., shows an increase of \$9,736,500 in imports and \$15,377,500 in exports for November. The increase in imports includes cotton, \$2,798,805, and certain manufactured articles, over \$2,500,000. The increase in exports was mainly in cotton fabrics, \$7,525,855.

* * *

The town of Morrisburg has petitioned the Minister of Railways to grant the town permission to lease 700 horsepower to be developed on the Montreal canal, to Toronto and Montreal capitalists, who are about to establish a tin plate industry which will employ 125 men and involve an outlay of not less than \$1,000,000.

* * *

Addison Norman, who has been prospecting for coal in Newfoundland in behalf of a company of which Hon. Geo. E. Foster is a prominent member, has returned from the colony. Mr. Addison has samples of coal from Coal Creek and Larkin Point. It is said to be splendid coking coal. The seams are said to range from three to twelve feet, with an aggregate of 27 feet. Six square miles have been bonded, and boring will be commenced this Winter.

* * *

It is reported at Mexico that the contract for the British steamship line between British Columbia and Mexico has been awarded to Andrew Weir & Co., of Glasgow, Scotland. The agreement calls for first-class steamers, capable of carrying 4,500 tons of freight each, 50 first-class passengers and from 300 to 400 steerage passengers. The line will be subsidized and will receive \$50,000 each

from the Canadian and Mexican Governments.

* * *

As a result of the poor condition of the lumber industry in British Columbia six mills have closed down for an indefinite period. All the mills are stocked to their full capacity and as there is no market, many more are contemplating closing their doors. Those who have already been affected are: Northern Pacific Lumber Co., Barnett; Rat Portage Lumber Co., Vancouver; Vancouver Lumber Co., and Royal City Mills, both of New Westminster and Vancouver; and the Canadian Pacific Lumber Co., of Vancouver.

A company has been organized in St. John, N.B., by H. E. Cook, of Boston, which has purchased the charter issued to the New Brunswick Gas and Power Co., by the Provincial Legislature last May. The company have secured the right to produce a new light called the "Century" light. Six gas companies operating throughout the province will be amalgamated with the new company. The new company is expected to begin its operations the beginning of next month.

NOTES.

Gold and copper have been discovered in the region of Lake Chibougamau, Quebec.

Copper has been discovered about five miles from New Liskeard, a town in New Ontario.

The Board of Trade, Rossland, B.C., are taking steps to petition the Dominion Government to grant a bonus on copper, as they have done on lead and iron.

Owing to the rapid advance of stocks in Amalgamated Copper, Munroe & Munroe, who are acting as fiscal agents for the Montreal and Boston Consolidated Mining and Smelting Co., had to suspend.

The Manitoba Peat Co., Winnipeg, which has been incorporated with a capitalization of \$200,000, is to build a peat fuel manufacturing plant near Fort Frances, Ont. The plant is to have a capacity of fifty tons per day.

A company of Spokane and Winnipeg people have been organized to take over

and operate the Great Hawk Eye Mine, situated in Ferry County, Wash. This is one of the best mines in the Western States, the ore being valued at \$200 per 100 pound sack.

COMPANIES INCORPORATED.

The Empire Cream Separator Co., of Canada, Toronto, capital \$40,000; purpose to manufacture and sell dairy and creamery machinery. The directors are: H. C. Sparling and W. R. Pringle, both of Toronto; and H. D. Petrie, Hamilton.

The Upper Spanish Improvement Co., Biscotasing, capital \$20,000; purpose to acquire and maintain dams, slides and piers and other works necessary to facilitate the transmission of timber down that part of the Spanish River which leads into the Province of Ontario. The directors are: R. Booth and P. Shannon, both of Pembroke, and J. A. Shannon, of Biscotasing.

The Mount Angel Gold Mines, Limited, Rossland, B.C., capital \$90,000.

The Small & Bucklin Lumber Co., Victoria, B.C., capital, \$100,000. The directors are: Geo. Small, E. H. Bucklin, E. J. Fader and N. S. Beardslee.

Sampson Appliance Co., Quebec, purpose to manufacture and deal in the Sampson ball-bearing bicycle plugs, shoe valves, etc. The directors are: R. Sampson and R. W. Sampson, both of Quebec city.

Kings Asbestos Mines, Quebec, capital \$300,000; purpose to acquire and carry on the business of mining, lumbering and the manufacture of lumber. The directors are: H. M. Whitney, Boston, U.S.; B. Bennett, Thetford Mines, and E. Slade, W. S. Thomas and A. H. Cock, all of Quebec city.

MODERN IN EVERY WAY.

Lewis Bros. & Co., Montreal, have ever maintained a reputation for the modern methods employed in the conduct of their business. The management take great pride in the thorough and up-to-date system by which they look after their customers', as well as their own, interests.

A recent departure of the firm is significant of the trend of the times, as well as of the fact that Lewis Bros. are on the alert for a practical suggestion for improvement of the conditions under which they work. This week marks the inauguration of early closing in their warehouse. Hereafter the office hours of the firm are 8 a. m. to 5.30 p. m., with one hour for lunch. This move is a good one, and might be followed to advantage by other houses.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP
Warren White Sulphur Springs,
Totten P.O., Virginia.

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish
Chemical and Drysaltery Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.

19 LUDGATE HILL - LONDON, ENG.

Order a stock of

**"Windmill Best"
Galvanized Sheets**

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, - Montreal

**DON'T INVITE TROUBLE**

By Buying Imitation FIRE, Water, Dust and Air-Proof SKYLIGHTS. **BUY THE GENUINE.** Our pamphlet will tell you about "OUR IMPROVED."

Manufacturers and Contractors
of

Metal Fireproof Windows
CORRUGATED IRON

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

A. B. ORMSBY LIMITED,

Cor. Queen and George Streets,
TORONTO, ONT.



This design a guarantee of quality

Manilla Paper | Fibre Paper

SMOOTH, TOUGH, BRIGHT, CLEAN
ALL SIZES AND WEIGHTS

THE TOUGHEST OF THE TOUGH
ALMOST WATERPROOF

SAMPLES AND
PRICES GLADLY
SENT.

CANADA PAPER CO.
TORONTO LIMITED MONTREAL

59

—Great people, those Cutts'.
—Last Summer they made an
All-Metal Window Screen.
—Now it is an All-Metal Ash
Sifter.

60

—Beats wood all to pieces.
—Yet sells for 25c.
—It sells like all hurrah.
—That is, wherever it is
offered.

Better send for half a gross—good stock.

C. M. CUTTS & CO., **SOLE MAKERS** **Toronto Junction, Ont.**

**Pedlar's "Perfect" Metal Lath**

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.
24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.**

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

GALVANIZED IRON RANGE BOILERS.		
Capacity.	Standard.	Extra heavy
Gals.		
12	4.00	6.00
18	4.25	6.00
24	4.50	6.50
30	4.50	6.50
35	5.50	7.50
40	6.50	8.50
52	10.50	13.00
66	16.00	19.00
82	19.00	22.00
100	24.00	29.00
120	28.00	35.00

SOIL PIPE AND FITTINGS.
Med. and Extra heavy pipe and fittings, dis. 60 per cent.
7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.	Per lb
Bar, half-and-half, guaranteed	0 18
Bar, half-and-half, commercial	0 17

PAINTS AND OILS.	
COLORS IN OIL.	
1-lb. tins, pure.	
Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French "	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

WHITE LEAD.	
Per 100 lb.	
Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorators' Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.	
Genuine, 560 lb. casks, per cwt	
\$4 25	\$4 50
Genuine, 100 lb. kegs, "	
4 75	4 00
No. 1, 560 lb. casks, per cwt	
4 00	4 25
No. 1, 100 lb. kegs, per cwt	
4 25	

WHITE ZINC.	
Extra Red Seal	
0 06	0 08
French V. M.	
0 06	0 06½
Lehigh	
0 06	0 06½

DRY WHITE LEAD.	
Pure, casks	
4 25	4 50
Pure, kegs	
4 50	4 00
No. 1, casks	
4 00	4 25
No. 1, kegs	
4 25	

PREPARED PAINTS.	
In ½, 1 and 1-gallon tins.	
Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 35
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Ancois-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle,	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.	
Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.	
In 5-gal. lots. Per gal. Net.	
Carriage, No. 1	1 50
Pale durable body	4 10
"rubbing	2 85
Gold size, japan	1 50
No. 1 brown japan	0 85
Elastic oak	1 10
Furniture, extra	0 90
"No. 1	1 35
Hard oil finish	1 35
Light oil finish	1 60
Damar	1 75
Shellac, white	2 40
"orange	2 30
Turpentine, brown japan	1 10
"black japan	1 10
"No. 1	0 85
Elastilite varnish, 1 gal. can, each	2 00
Granite floor finish, per gal.	2 75
Maple Leaf coach enamels, size 1, \$1.20; size 2, 70c; size 3, 40c, each	
Sherwin-Williams' kopal varnish, assorted case, from	to 1 gal., \$2.50.

GLUE.	
Common	0 08
French medal	0 10
White, extra	0 18
Gelatin	0 18
Strip	0 18
Coopers	0 19
Huttner	0 12
Ground	0 12
Cologne, genuine	0 16

HARDWARE.	
AMMUNITION.	
Cartridges.	
B. B. Caps Dominion, 50 and 5 and 25 per cent. American \$2.00 per 1000.	
C. B. Caps American, \$2.60 per 1000.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c. Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, list net Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American 10 per cent. advance on list.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount. American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.	
per lb.	
Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 25
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.	
Discount 20 per cent.	
ANVILS.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

APPLE PARERS.	
Woodyatt Hudson, per doz., net	4 50
AUGERS.	
Gilmour's, discount 65 and 5 per cent. off list.	

AXES.	
Chopping Axes	
Single bit, per doz.	7 00
Double bit	10 00
Bench Axes, 40 per cent.	5 50
Broad Axes, 25 per cent.	6 25
Hunters' Axes	7 00
Boys' Axes	12 00
Splitting Axes	10 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.	
Red Ridge, boys', handled.	5 75
hunters'	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.	
Ordinary, per gross	6 00
Best quality	10 00

BELLS.	
Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	

Cow.	
American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.	
Gongs, Sargent's	5 50
"Peterboro", discount 50 and 10 per cent. off new list.	8 00

Farm.	
American, each	1 25
House.	3 00
American, per lb.	0 35

BELTING.	
Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	

Agricultural, not wider than 4 in., 75 per cent.	

BITS.	
Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.	
Gilmour's, 47½ per cent.	
Expansive.	
Clark's, 40 per cent.	

Gimlet.	
Clark's, per doz.	0 65
Diamond, Shell, per doz.	1 00
Nail and Spike, per gross.	2 25
Stitch Shoe Bolts.	5 20

BLIND AND RED STAPLES.	
All sizes, per lb.	0 07½

BOLTS AND NUTS	
Carriage Bolts, common (\$1 list)	Per cent.
" 3-16 and ½"	60 and 10
" 5-16 and ¾"	55 and 5
" 7-16 and up	55 and 5
" full ass. (\$2.40 list)	60
" Norway Iron (\$3 list)	60

Machine Bolts, all sizes, ½ and less	
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5

Coach Screws, cone point.	
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4½c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

BOOT CALKS.	
Small and medium, ball	per M. 4 25
Small heel	4 50

BRIGHT WIRE GOODS.	
Discount 62½ per cent.	

BUTCHERS' CLEAVERS.	
German	per doz. 6 00
American	12 00

BUTCHER KNIVES.	
Bailey's	per doz. 0 60

BUILDING PAPER, ETC	
Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll.	1 15

Carpet Felt.	
per ton	45 00
Heavy Straw Sheathing, per ton	35 00
Dry Sheathing, per roll, 400 sq. ft.	0 40
Tar	400 " 0 50
Dry Fibre	400 " 0 55
Tarred Fibre	400 " 0 65
O. K. & I. X. L.	400 " 0 70
Resin-sized	400 " 0 45
Oiled Sheathing	400 " 1 00
" "	400 " 0 70

Root Coating, in barrels.	
per gal.	0 17
Roof "small packages"	0 25
Refined Tar	per barrel 5 00
Coal Tar	4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 00
Slater's felt	per roll 0 60

BULL RINGS.	
Copper, \$2.00 for 2½-inch, and \$1.90 for 2-inch.	

BUTTS.	
Wrought Brass, net revised list.	

Cast Iron.	
Loose Pin, discount 60 per cent.	

Wrought Steel.	
Fast Joint, discount 70 to 70 and 5 per cent.	
Loose Pin, discount 70 to 70 and 5 per cent.	

CARPET STRETCHERS.	
American	per doz. 1 00
Bullard's	6 50

CASTORS.	
Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.	
No. 32 and 33	per gross 7 50

CHALK.	
Carpenters' Colored, per gross	0 45
White lump	per cwt. 0 60
Red	0 05
Crayon	per gross 0 14

CHISELS.	
Socket, Framing and Firmer	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.	
Colonial Stock Foods, 50c. packages,	
" " " 25c. pkgs.,	per doz \$4 00
" " " 10c. "	2 00
" " " 25-lb. pall, each	75
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz	1 25
Worm	1 25

International Stock Foods, \$1 packages,	
per doz.	\$ 09
International Stock Foods, per pall	2 75
" " " \$1 pkgs. per doz.	10 50
" " " \$1 pkgs. per doz.	8 00
" " " \$1 pkgs. per doz.	8 00
" " " \$1 pkgs. per doz.	8 00
" " " \$1 pkgs. per doz.	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz	

CLOTHES REELS.	
Davis Clothes Reels, dis. 40 per cent.	

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.			GAUGES.			Clothes line, No. 61..			Cabinet.		
Plain or Corrugated.			Marking, Mortise, Etc.			Harness.....			Eagle, discount 30 per cent.		
2-inch.....	per 100 feet	\$ 00	Stanley's, discount 50 to 55 per cent.			Hat and coat..... per gro.			English and Am..... per doz.		
3 ".....	"	4 00	Wire Gauges.			Chandelier..... per doz.			Padlocks.		
4 ".....	"	5 25	Winn's, Nos. 26 to 33.....each			Wrought Iron.			Flat head, discount 25 per cent.		
5 ".....	"	6 75	GILLET'S POWDERED LYE.			Canadian dis-			Round head, discount 20 per cent.		
6 ".....	"	9 00	1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.			Wire.			MACHINE SCREWS.		
CRADLES, GRAIN.			HALTERS.			Hat and coat, discount 60 per cent.			Iron and Brass.		
Canadian, discount 20 to 25 per cent.			Rope, 1-inch.....per gross			Belt..... per 1,000			Round head, discount 20 per cent.		
CROSSCUT SAW HANDLES.			Rope, 1 to 1 1/2-inch.....			Screw, bright, discount 60 per cent.			MALLET.		
S. & D., No. 3.....	per pair	\$ 17 1/2	Leather, 1-inch.....per doz.			HORSE NAILS.			Tinmith's.....per doz.		
S. & D., " 5.....	"	0 22 1/2	Leather, 1 1/2 ".....			"C" brand, 55 to 60 per cent.			Carpenters', hickory, " 1 25		
S. & D., " 6.....	"	0 15	Web.....			"M" brand, 55, per cent.			Lignum Vitae..... " 3 85		
Boynton pattern.....	"	0 20	HAMMERS.			"Monarch," 50 and 7 1/2 per cent.			Caulking, each..... 0 60		
DOOR SPRINGS.			Nail.			"Peerless" 50 per cent. dis.			NAILTUCKS.		
Torrey's Rod.....	per doz.	1 85	Maydole's, discount 5 to 10 per cent. Canadian			HORSESHOES.			Canadian.....per doz.		
Coll, 9 to 11 in.....	"	0 95	discount 25 to 27 1/2 per cent.			F.O.B. Montreal			MEAT CUTTERS.		
English.....	"	2 00	Tack.			"P.B." brand, new pattern, base..... \$3 50			American, discount 3 1/2 per cent.		
DRAW KNIVES.			Sledge.			"M." brand, base..... 3 65			Gem.....each		
Coach and Wagon, discount 50 per cent.			Canadian.....per lb. 0 07 1/2			JAPANNED WARE.			MILK CAN TRIMMINGS.		
Carpenters' discount 60 and 10 per cent.			English and Canadian, per lb. 0 22			50 per cent.			Discount 25 per cent.		
DRILLS.			Ball Peen.			FICKS.			NAILS.		
Hand and Breast.			Canadian.....per doz. 0 07 1/2			Star.....per doz. 3 00			2d.....3 30		
Miller's Falls, per doz., net list			Fork.			KETTLES.			3d.....2 95		
DRILL BITS.			C. & B., discount 40 per cent., revised list.			Brass spun 7 1/2 per cent. discount off new list.			4 and 5d.....2 70		
Morse, discount 37 1/2 to 40 per cent.			Hoe.			Copper.....per lb. 0 30			6 and 7d.....2 60		
Standard, discount 50 and 5 to 55 per cent.			C. & B., discount 40 per cent., revised list.			American, 60 and 10 to 65 and 5 per cent.			8 and 9d.....2 45		
FAUCETS.			Saw.			KEYS.			10 and 12d.....2 40		
Common, cork-lined, discount 35 per cent.			American.....per doz. 1 00			Lock, Canadian dis. 40 to 40 and 10 per cent.			16 and 20d.....2 35		
EAVETROUGHS.			Plane.			Cabinet, trunk and padlock,			30, 40, 50 and 60d (base).....2 30		
10-inch.....per 100 ft. 10 00			American.....per gross 3 15			American.....per gross			Cut nails in carlots 5c. less.		
ELBOWS (stovepipe.)			Hammer and Hatchet.			KNOBS.			Wire nails in carlots are \$2.20 (base).		
5 and 6-inch, common.....per doz. 1 20			Canadian, discount 40 per cent.			Door, japanned and N.P., per			Steel cut nails 10c. extra.		
7-inch....." 1 35			HANGERS.			doz.....1 50			Miscellaneous wire nails, discount 75 per cent.		
Polished, 15c. per dozen extra.			Steel barn door.....8 00			doz.....2 75			Coopers' nails, discount 30 per cent.		
ESCUTCHEONS.			Stearns, 4-inch.....4 50			Bronze, Genuine.....6 00			NAIL PULLERS.		
Discount 50 and 10 per cent., new list			5-inch.....6 00			Shutter, porcelain, F. & L.			German and American.....1 75		
ESCUTCHEON PINS.			Zenith.....9 00			screw.....per gross 1 30			NAIL SETS.		
Iron, discount 40 per cent.			Lane's covered—			White door knobs.....per doz. 2 00			Square, round and octagon,		
5 and 6-inch, common.....per doz. 1 20			No. 11, 5-foot run.....8 40			HAY KNIVES.			per gross.....3 33		
7-inch....." 1 35			No. 11 1/2, 10-foot run.....10 80			Net prices.			Diamond.....1 00		
Polished, 15c. per dozen extra.			No. 12, 10-foot run.....12 60			LAMP WICKS.			POULTRY NETTING.		
ESCUTCHEONS.			No. 14, 15-foot run.....21 00			Discount, 60 per cent.			2-in. Mesh, 19 w.g., dia. 60 per cent.		
Discount 50 and 10 per cent., new list			Steel, covered.....4 00			LADDERS, EXTENSION.			2-in. Mesh, 16 w.g. and heavier, 50 p.p.		
ESCUTCHEON PINS.			track, 1 x 3-16 in (100 ft).....3 75			Waggoner Extension Ladders, dis. 40 per cent.			OAKUM.		
Iron, discount 40 per cent.			1 1/2 x 3-16 in (100 ft).....4 75			Cold Blast.....per doz. 7 00			U. S. Navy.....per 100 lb. 6 75		
FACTORY MILK CANS.			HARVEST TOOLS.			No. 3, "Wright's".....8 50			Plumbers....." 3 00		
Discount off revised list, 40 per cent.			Discount 60 per cent.			Ordinary, with O burner.....4 00			OILERS.		
FILES AND RASPS.			HAUTECH.			Dashboard, cold blast.....5 75			McClary's Model galvanized		
Great Western.....70 and 10 per cent.			Canadian, discount 40 to 42 1/2 per cent.			No. 0.....5 75			oil can, with pump, 5 gallon,		
Arcade.....70 " 10 "			Shingle, Red Ridge 1, per doz.....4 40			Japanning, 50c. per doz. extra.			per dozen.....10 00		
Kearney & Foot.....70 " 10 "			Barrel, Underhill.....5 00			LEMON SQUEEZERS.			Davidson oilers, discount 40 per cent.		
Dixon's.....70 " 10 "			HAT ENAMEL.			Porcelain lined.....per doz. 2 20			Zinc and tin, discount 50, 50 and 10 per cent.		
American.....70 " 10 "			Henderson & Potts' "Anchor Brand"			Galvanized....." 1 87			Copper.....per doz. 1 25		
J. Barton Smith.....70 " 10 "			Hinges.			King, wood....." 2 75			Brass....." 1 50		
McClellan.....70 " 10 "			Blind, Parker's, discount 60 per cent.			King, glass....." 4 00			Malleable, discount 25 per cent		
Eagle.....70 " 10 "			Heavy T and strap, 4-in., per lb.....0 06 1/2			All glass....." 0 50			GALVANIZED PAIRS.		
Nicholson, 60 and 10 to 60, 10 and 5			Light T and strap, discount 65 and 5 per cent			LAWN MOWERS FOR 1905.			Dufferin pattern pairs, discount 47 1/2 per cent		
Royal.....80 " "			Screw hook and hinge—			Woodyatt, 10 1/2-in., 14-in. cut			Flaring pattern, discount 47 1/2 per cent		
Globe.....70 to 75 " "			6 to 10 in.....per 100 lb. 4 50			Star.....9-in. cut			Galvanized washtubs, discount 47 1/2 per cent		
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.			12 in. up.....3 25			Woodyatt, 10 1/2-in., ball bearing			PIECED WARE.		
Jowitt's, English list, 25 to 27 1/2 per cent.			Spring, No. 20, per gro. pairs.....10 50			Grass Boxes.....1 75			Discount 40 per cent off list, June, 1899.		
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50			Spring, Woodyatt pattern, per gro. No. 5, \$17.50; No. 10, \$18; No. 20, \$10.80; No. 120, \$20; No. 51, \$10; No. 50, \$27.50.			King Edwd, 12-in., 14-in. cut 9 00 to 10 00			10-qt. flaring sap buckets, discount 40 per cent		
GLASS.			HOES.			Horse Lawn Mowers, "Special."			6, 10 and 14-qt. flaring pails dis. 40 per cent.		
Window. Box Price.			Garden, Mortar, etc., discount 60 per cent.			Discount, 50 per cent., with freight concessions in quantity shipments.			Creamer cans, discount 40 per cent.		
Star.....	Per	Per	Planter.....per doz. 4 00			Maxwell & Sons:			Per dozen.....6 00		
D. Diamond	50 ft.	100 ft.	Tinned case, 35 per cent.			10 1/2-in. high wheel.....7 50			PICTURE NAILS.		
Under 25.....	3 80	5 06	HOOKS.			9-in.....5 50			Porcelain head.....per gross 1 35		
26 to 40.....	4 00	5 44	Cast Iron.			8-in.....4 90			Brass head....." 0 40		
41 to 50.....	4 50	6 56	Bird case.....per doz. 0 50			Discount 50 per cent.			TIN AND GILT, discount 75 per cent.		
51 to 60.....	4 75	7 50	LOCK.			Canadian, 50 to 50 and 10 per cent			PINE TAR.		
61 to 70.....	5 00	8 62	Russell & Erwin.....per doz.			Russell & Erwin.....per doz.			1 pint in tins.....per gross 7 80		
71 to 80.....	5 30	9 38	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent			1 pint in tins.....per gross 9 60		
81 to 85.....	5 75	10 75	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent			PLANES.		
86 to 90.....	6 00	11 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent			Wood bench, Canadian discount 40 per cent., American discount 50 per cent.		
91 to 95.....	6 25	12 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent			Wood, fancy Canadian or America 37 1/2 40 per cent		
96 to 100.....	6 50	13 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
101 to 105.....	7 00	14 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
106 to 110.....	7 25	15 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
111 to 115.....	7 50	16 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
116 to 120.....	7 75	17 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
121 to 125.....	8 00	18 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
126 to 130.....	8 25	19 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
131 to 135.....	8 50	20 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
136 to 140.....	8 75	21 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
141 to 145.....	9 00	22 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
146 to 150.....	9 25	23 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
151 to 155.....	9 50	24 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
156 to 160.....	9 75	25 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
161 to 165.....	10 00	26 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
166 to 170.....	10 25	27 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
171 to 175.....	10 50	28 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
176 to 180.....	10 75	29 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
181 to 185.....	11 00	30 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
186 to 190.....	11 25	31 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
191 to 195.....	11 50	32 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
196 to 200.....	11 75	33 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
201 to 205.....	12 00	34 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
206 to 210.....	12 25	35 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
211 to 215.....	12 50	36 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
216 to 220.....	12 75	37 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
221 to 225.....	13 00	38 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
226 to 230.....	13 25	39 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
231 to 235.....	13 50	40 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
236 to 240.....	13 75	41 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
241 to 245.....	14 00	42 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
246 to 250.....	14 25	43 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
251 to 255.....	14 50	44 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
256 to 260.....	14 75	45 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
261 to 265.....	15 00	46 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
266 to 270.....	15 25	47 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
271 to 275.....	15 50	48 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
276 to 280.....	15 75	49 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
281 to 285.....	16 00	50 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
286 to 290.....	16 25	51 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
291 to 295.....	16 50	52 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
296 to 300.....	16 75	53 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
301 to 305.....	17 00	54 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
306 to 310.....	17 25	55 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
311 to 315.....	17 50	56 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
316 to 320.....	17 75	57 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
321 to 325.....	18 00	58 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
326 to 330.....	18 25	59 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
331 to 335.....	18 50	60 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
336 to 340.....	18 75	61 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
341 to 345.....	19 00	62 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
346 to 350.....	19 25	63 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
351 to 355.....	19 50	64 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
356 to 360.....	19 75	65 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
361 to 365.....	20 00	66 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
366 to 370.....	20 25	67 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
371 to 375.....	20 50	68 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
376 to 380.....	20 75	69 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
381 to 385.....	21 00	70 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
386 to 390.....	21 25	71 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
391 to 395.....	21 50	72 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
396 to 400.....	21 75	73 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
401 to 405.....	22 00	74 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
406 to 410.....	22 25	75 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
411 to 415.....	22 50	76 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
416 to 420.....	22 75	77 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
421 to 425.....	23 00	78 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
426 to 430.....	23 25	79 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
431 to 435.....	23 50	80 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
436 to 440.....	23 75	81 50	Canadian, 50 to 50 and 10 per cent			Canadian, 50 to 50 and 10 per cent					
441 to 445.....	24 00	82 50	Canadian,								

A MOST APPROPRIATE XMAS GIFT

Are you puzzling your brain what to buy the folks for Xmas? No need to do that. Just look at our combination Bookcase and Secretary for \$24.00, or a Bookcase only, comprising 3 sections, top and base, for \$12.75, suitable for 75 books. They're not only a necessary household want but a handsome piece of furniture which will do credit to any room. Every home needs this article, so get your order in now. They're going fast.

FULL LINE OF OFFICE FURNITURE AND LABOR SAVING DEVICES IN STOCK.

THE OFFICE SPECIALTY MFG. CO., LIMITED

Special \$21.00

Factories: Newmarket
Our new premises—almost ready: 97-103 Wellington St. West

55 Yonge St., TORONTO

PLANE IRONS.
English per doz. 2 00 5 00

PLIERS AND NIPPERS.
Button's genuine, per doz. pairs, discount 37½ to 40 per cent.
Button's imitation per doz. 5 00 9 00
German " 0 60 0 60

PRESSED SPIKES.
Discount 20 per cent.

PULLEYS.
Hothouse per doz. 0 55 1 00
Axle " 0 22 0 33
Screw " 0 27 1 00
Awning " 0 35 2 50

PUMPS.
Canadian cistern 1 80 3 60
Canadian pitcher spout 1 40 2 10

PUNCHES.
Saddler's per doz. 1 00 1 85
Conductor's " 3 00 15 00
Tinner's, solid per set 0 72
" hollow per inch 1 00

RAKES.
Wood per doz. net 1 20 up.

RAZORS. per doz.
Elliot's 4 00 18 00
Geo. Butler's & Co.'s 4 00 18 00
Boker's 7 50 11 00
" King Cutter 13 50 18 50
Wade & Butcher's 3 60 10 00
Carbo Magnetic 15 00
Griffin Barber's Favorite 10 75
Griffin No. 65 13 00
Griffin Safety Razors 13 50
Griffin Strapping Machines 8 50
Lewis Bros' "Klean Kutter" 10 50 14 00
Hindoo 3 50 10 00
Orgateem's Swedish 7 50 20 00
Clausen, 50 and 10 per cent.
Clausen Strops, 50 and 10 per cent.

REGISTERS.
Discount 40 per cent.

RIVETS AND BURNS.
Iron Rivets, black and tinned, 60 and 10 p. c.
Iron Burns, discount 55 per cent.
Copper Rivets, with usual proportion burrs, 45 per cent.
Copper Burns only, discount 30 and 10 per cent.
Extras on Tinned or Coppered Rivets, 1-lb. packages 1c. per lb.; 1-lb. packages 2c. lb.

RIVET SETS.
Canadian, discount 35 to 37½ per cent.

ROPE, ETC.
Sisal 0 11
Pure Manila 0 14½
"British" Manila 0 11
Cotton, 3-16 inch and larger 0 21 0 23
" 5-32 inch 0 25 0 27
" 1 inch 0 25 0 28
Russia Deep Sea 0 16
Jute 0 09
Lath Yarn, single 0 10½
Sisal bed cord, 48 feet per doz. 0 65
" 60 feet " 0 80
" 72 feet " 0 95

RULES.
Boxwood, discount 70 per cent.
Ivory, discount 20 to 25 per cent.

SAD IRONS.
Potts, No. 55, polished, per set 0 80
" No. 50, nickel-plated, " 0 90
Common, plain 4 50
" plated 5 50

SAND AND EMERY PAPER.
S. & A. sand, discount, 40 and 5 per cent.
Emery, discount 40 per cent.
Garnet (Rutten's), 5 to 10 per cent. advance on list

SAP SPOUTS.
Bronzed iron with hooks per 1,000 7 50
"Eureka" tinned steel, hooks " 8 00

SAWS.
Hand, Diston's, discount 12½ per cent.
S. & D., discount 40 per cent.
Crosscut, Diston's, per foot 0 35 0 55
S. & D., discount 35 per cent. on Nos. 2 and 3.
Hack, complete, each 0 75 2 75
" frame only each 0 50 1 25

SASH WEIGHTS.
Sectional per 100 lb. 2 00 2 25
Solid " 1 50 1 75

SASH CORD.
Per lb. 0 28 0 30

SAW SETS. per doz.
Lincoln and Whiting 4 75
Hand Seta, Perfect 4 00
X-Cut Seta, 7 50

SCALES.
Gurney Standard, 40 per cent.
Gurney Champion, 50 per cent.
Burrow, Stewart & Milne—
Imperial Standard, discount 40 per cent.
Weigh Beams, discount 35 per cent.
Champion Scales, discount 50 per cent.
Fairbanks standard, discount 35 per cent.
" Dominion, discount 55 per cent.
" Richelieu, discount 55 per cent.
Warren's new Standard, discount 40 per cent.
" Champion, discount 50 per cent.
" Weighbeams, discount 35 per cent.

SCREW DRIVERS.
Sargent's per doz. 0 65 1 00

SCREEN DOORS.
Common doors, 2 or 3 panel, walnut stained, 4-in. style per doz. 6 50
Common doors, 2 or 3 panel, yellow and green stained, 4-in. style per doz. 6 75
Common doors, 2 or 3 panel, in natural colors, oil finish per doz. 8 75
3-in. style 20c. per dozen less.

SCREWS.
Wood, F. H., bright and steel, discount 87½ per cent.
Wood, R. H., bright, dis. 82½ per cent.
" F. H., brass, dis. 80 per cent.
" R. H., " dis. 75 per cent.
" F. H., bronze, dis. 75 per cent.
" R. H., " dis. 70 per cent.
Drive Screws, dis. 87½ per cent.
Bench, wood per doz. 3 25 4 00
" iron " 4 25 5 00
Set, case hardened, dis. 60 per cent.
Square Cap, dis. 50 and 5 per cent.
Hexagon Cap, dis. 45 per cent.

SOYTHES.
Per doz. net 6 00 9 00

SOYTHE SNATHS.
Canadian, discount 40 per cent.

SHEARS.
Clausen, nickel, discount 80 per cent.
Clausen, Japan, discount 67½ per cent.
Clausen, tailors, discount 40 per cent.
Seymour's, discount 50 and 10 per cent.

SHOVELS AND SPADES.
Canadian, discount 45 per cent.

SINKS.
Cast iron, 16 x 24 0 85
" 18 x 30 1 00
" 18 x 36 1 40

SNAPS.
Harness, German, discount 25 per cent.
Look, Andrews 4 50 11 50

SOLDERING IRONS.
1, 1½-lb. per lb. 0 37
2-lb. or over " 0 34

SQUARES.
Iron, No. 492 per doz. 1 90 2 25
" No. 493 " 2 40 2 55
" No. 494 " 3 25 3 40

STEEL, discount 60 and 5 to 65 per cent.
Try and Bevel, discount 50 to 52½ per cent.

STAMPED WARE.
Plain, discount 75 and 12½ per cent. off revised list.
Retinned, discount 75 per cent. off revised list.

STAPLES.
Galvanized 3 00
Plain 2 80
Coopers, discount 45 per cent.
Poultry netting staples, discount 40 per cent.
American discount 25 per cent.

STOCKS AND DIES.
Discount 25 per cent.

STONE.
Washita per lb. 0 28 0 60
Hindustan " 0 06 0 07
Plain slip " 0 09 0 09
Labrador " 0 13 0 15
" Axe " 0 15 0 15
Turkey " 1 50 1 50
Arkansas " 1 10 1 10
Water-of-Ayr per gross 3 50 5 00
Scythe 25 00
Grind, 40 to 200 lb. per ton 28 00
" under 40 lb. 31 00
" 200 lb. and over 7 00

STOVEPIPES.
5 and 6 inch, per 100 lengths 7 00
7 inch 7 50

TACKS, BRADS, ETC.
Carpet tacks, blued 80 and 15
" tinned 80 and 20
" (in kegs) 40
Cut tacks, blued, in dozens only 60
Swedes cut tacks, blued and tinned 80 and 10
In bulk 75
In dozens 85, 12½ and 12½
Swedes, upholsterers', bulk 70
" brush, blued and tinned 75 and 12½
Japanned 35
Zinc tacks 55
Leather carpet tacks 55
Copper tacks 50
Copper nails 52½
Trunk nails, black 65 and 5
Trunk nails, tinned 65 and 10
Clout nails, blued 65 and 5
Chair nails 35
Patent brads 40
Fine finishing 40
Lining tacks, in papers 10
" in bulk 15
" solid heads, in bulk 75
Saddle nail, in papers 15
" in bulk 15
Tufting buttons, 22 line, in dozens only 60
Zinc glaziers' points 5
Double pointed tacks, papers 40 and 10
" bulk 90
Olinch and duck rivets 45

TAPE LINES.
English, ass skin per doz. 2 75 5 00
English, Patent Leather 5 50 9 75
Ochsterman's each 0 90 2 85
" steel each 0 80 8 00

TINNERS' SNIPS.
Per doz. 3 00 15 00
Clausen, discount 35 per cent.

THERMOMETERS.
Tin case and dairy, 75 to 75 and 10 per cent.

TRAPS (steel).
Game, Newhouse, discount 25 per cent.
Game, H. & N., P. S. & W., 65 per cent.
Game, steel, 72½, 75 per cent.

TROWELS.
Diston's, discount 10 per cent.
German per doz. 4 75 6 00
S. & D., discount 35 per cent.

TWINKLE.
Bag, Russian per lb. 0 27
Wrapping, cotton, 3-ply 0 24
" 4-ply 0 27
Mattress per lb. 0 33 0 45
Staging 0 27 0 35

VISES.
Wright's 0 13½
Brook's 0 12½
Pipe Vise, Hinge, No. 1 3 50
" No. 2 5 50
Saw Vise 4 50 9 00

WIRE.
Columbia Hardware Co.
Blacksmiths' (discount) 60 per cent.
parallel (discount) 45 per cent.

ENAMELLED WARE.
White, Princess, Turquoise, Blue and White discount 50 per cent.
Diamond, Famous, Premier, discount 50 and 10 per cent.
Granite or Pearl, Imperial, Crescent, discount 50, 10 and 10 per cent.
Premier steel ware, 40 per cent.
"Star" decorated steel and decorated whit 25 per cent.

WIRE.
Smooth Steel Wire. \$2 25
No. 0-9 gauge 60 extra.
10 " 12½
11 " 20c
12 " 30c
13 " 40c
14 " 55c
15 " 70c

Extra net per 100 lb.—Oiled wire 10c, spring wire \$1.25, special hay baling wire 30c, best steel wire 75c, bright soft drawn 15c, charcoal (extra quality) \$1.25, packed in casks or cases 15c, bagging and papering 10c, 50 and 100-lb. bundles 10c, in 25-lb. bundles 15c, in 5 and 10-lb. bundles 25c, in 1-lb. hanks, 50c, in 1-lb. hanks 75c, in 1-lb. hanks \$1.

Fine Steel Wire, discount 27½ per cent.
List of extras: In 100-lb. lots: No. 17, \$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No. 24, \$8—No. 25, \$8.30—No. 26, \$8.50—No. 27, \$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34, \$17. Extras net—tinned wire, No. 17-25, \$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered, 5c—oiling 10c—in 25-lb. bundles, 15c—in 5 and 10-lb. bundles, 25c—in 1-lb. hanks, 50c—in 1-lb. hanks, 35c—in 1-lb. hanks, 50c—packed in casks or cases, 15c—bagging or papering, 10c.

Brass wire, discount 60 per cent. off the list.
Copper wire, discount 60 per cent. net cash 30 days, f.o.b. factory.

Galvanized wire, per 100 lb.—Nos. 4 and 5, \$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15—No. 9, \$2.55—No. 10, \$2.30 to \$2.30—No. 11, \$3.25 to \$3.25—No. 12, \$2.50—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No. 15, \$4.30—No. 16, \$4.30. Base sizes, Nos. 6 to 9, \$2.27½ f.o.b. Cleveland. In carlots 12½c. less.

Clothes Line Wire, regular 7 strand, No. 17, \$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow 6 strand, No. 17, \$4.30; No. 18, \$2.70; No. 19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton, Toronto, Montreal.

WIRE FENCING.
Galvanized barb 2 50 3 75
Galvanized, plain twist 2 50 3 75
Galvanized barb, f.o.b. Cleveland, \$2 30 for small lots and \$2 20 for carlots.

COILED SPRING WIRE.
High Carbon, No. 9 \$2 70
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Painted Screen, per 100 sq. ft., net 1 50
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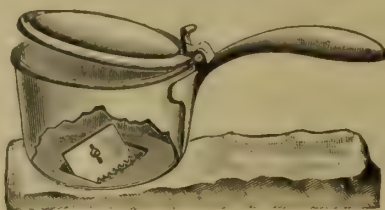
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Eclipse, per doz 36 00
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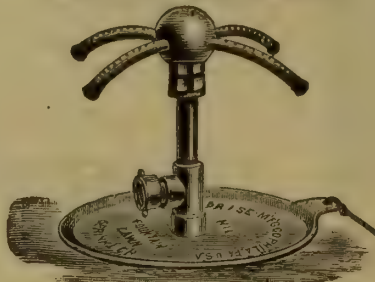
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Canadian make, discount 40 per cent.

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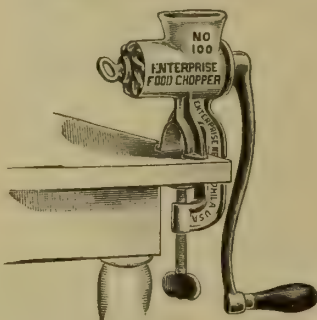
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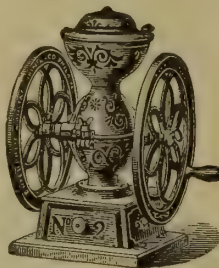
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No. 300 - 2.25

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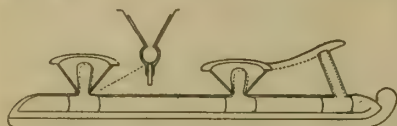
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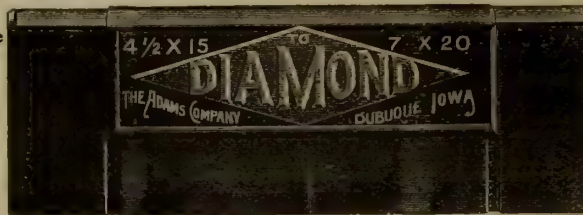
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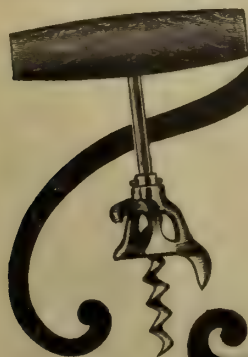
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To Grip Co

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MONTREAL AND TORONTO, DECEMBER 24, 1904

NO. 52

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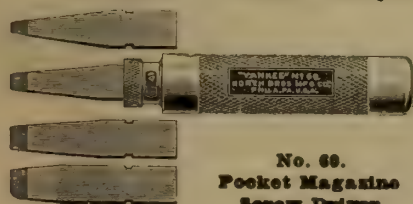
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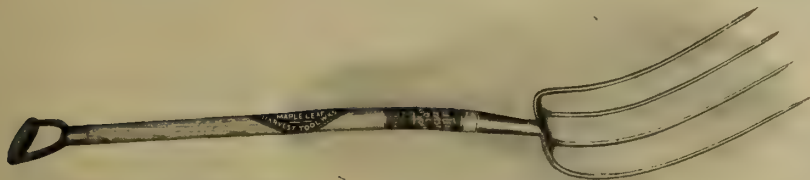
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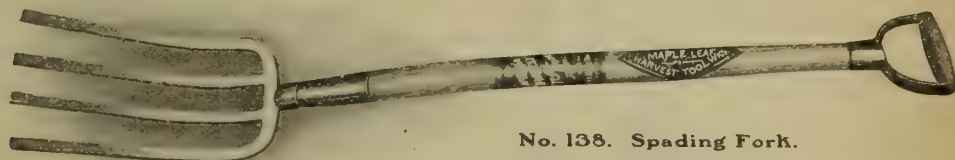
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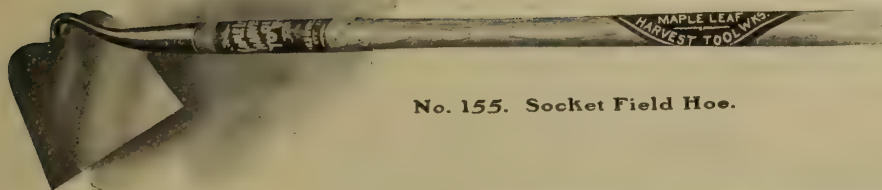
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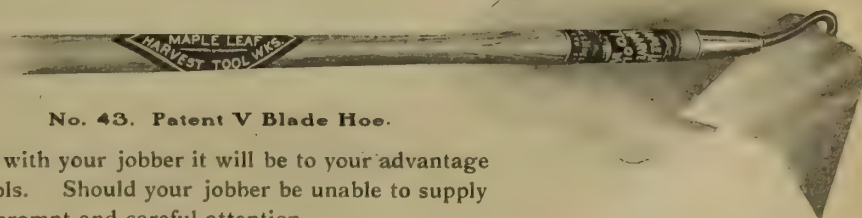
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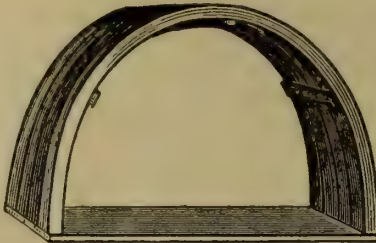
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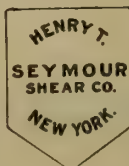
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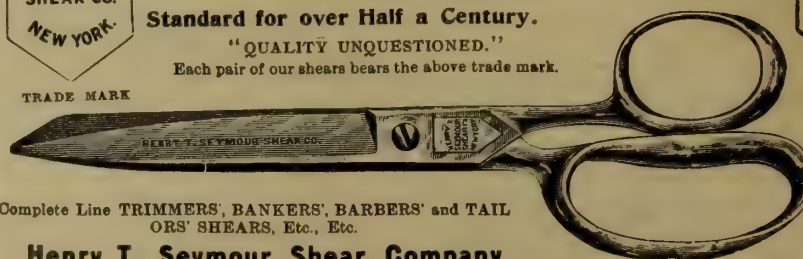
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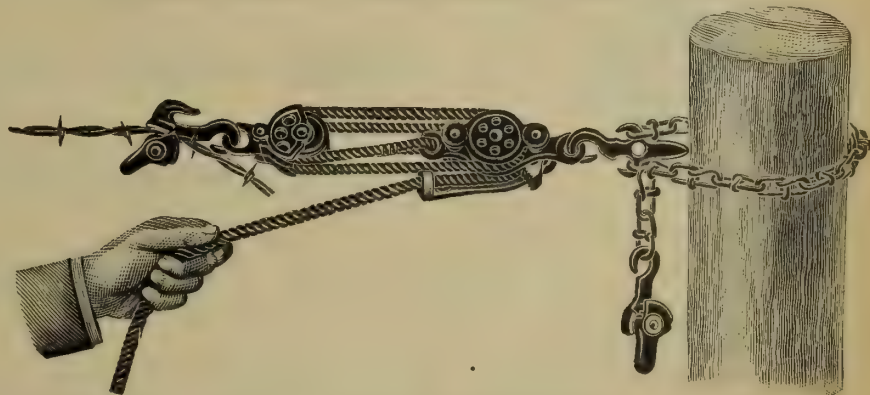
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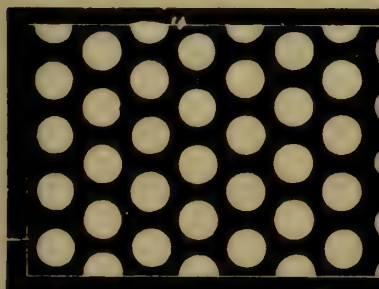
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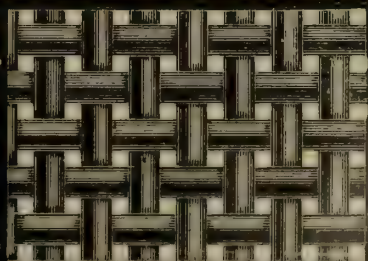


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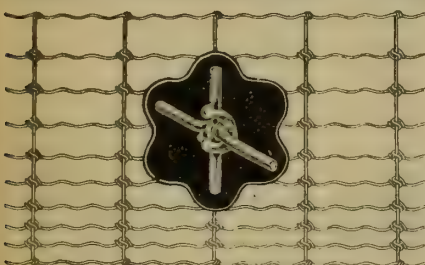
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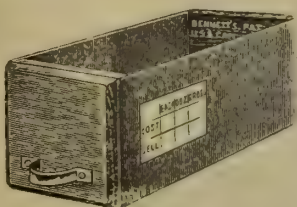
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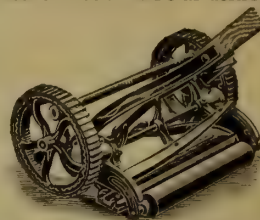
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To our customers one and all we tender
 our hearty good wishes this Christmas tide.

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TROUGH SYSTEM OF WATER CLOSETS

By J. J. Sullivan, in
Plumbers' Trade
Journal.

MANY of the old time plumbers still cling to the idea that there is nothing like the old trough water closets for out doors. About 1867 the old trough water closets made their first appearance in the City of New York. The health department, recognizing the great danger and menace to health that existed in the presence of the old privy vault of that day, ordered every privy vault in the city abolished, where it was possible to obtain a sewer connection. Then arose the question of providing a suitable substitute. Strange as it may seem it was a worthy stone mason who hit upon the idea that was at once put into practice. The scavenger removed the excreta from the old privy vault and after a thorough cleansing of the vault and disinfection of the surrounding earth he proceeded to build the first trough water closet connected to the city sewers in the City of New York, and no doubt in the country. The space occupied by the old vault was lengthened and sunk to a depth of 7 to 9 feet below the surface of the ground—with a width of about 4 feet. A sewer connection minus a trap was provided at one end, with a large bar strainer over the outlet and a water supply with a stop cock at the further end. The trough itself was nothing but an oblong box, built of blue stone flagging, having a good pitch to the outlet; the side walls were of the same material up to the surface of the ground, with a brick backing, to which the stone flagging was fastened by iron anchors. The water was kept running at the further end all the time, washing the deposits down to the outlet, where they eventually found their way to the street sewer.

THE FIRST TROUGH SYSTEM.

This system was in vogue for a number of years, and in fact the writer knows of one such trough in daily use in a thickly populated section of old New York to-day—and he has been frequently assured by the caretaker in her own words that it was the finest water closet in the world. There is no doubt that it was a great improvement on the old privy vault and worked fairly well so long as the water was kept running and constant attention given it. But the housekeepers became careless and the tenants as well. They had been so

accustomed to consigning all the house waste, both solid and liquid, to the old privy vault, and this new contrivance looked so much like the other, the natural inference was that it would answer the same purpose. So everything was deposited there as of old. Rope, bottles, old shoes, garbage, and refuse of every kind, including dead animals; and the writer once witnessed the removal of a new born child.

Around the old five points, where thieves made their headquarters, the old trough water closet afforded a safe hiding place for articles of value when the police got too hot on the trail of the robbers. Naturally, these large, solid substances could not pass into the sewer, an obstruction occurred, the water was shut off, and the trough water closet became virtually a privy vault, requiring the services of the scavengers or Ho-Boys, as they were nicknamed at the time, to remove the vast accumulation of filth with its attendant obnoxious and sickening odors.

A NEW METHOD.

Then another bricklayer thought he would try his hand at the game, so he constructed a trough water closet of brick and cement semicircular in shape, with the usual water supply at one end and at the other a solid wooden plug of hard wood, with a leather washer, was inserted into the iron or earthen pipe outlet while an iron grating in an upright position was placed before the plug, to prevent obstruction of the soil pipe. This method was a slight improvement on the first, as the water was retained in the trough and by removing the plug the night soil and liquid matter passed out into the sewer, while the solid refuse was removed from the face of the upright strainer, with an iron hook.

There are several such troughs still in use in the City of New York to-day. After the stone mason and bricklayer came the iron moulder, who, realizing that a new field had been opened up for him, started the manufacture of an iron trough to be used in lieu of the stone and brick trough, and which is known in the trade to-day as the school sink. How it acquired this name is unknown to the writer. But as they were largely used in the public schools of the city when first introduced, there is hardly a doubt that they derived the name that

has stuck to them since from their general use in the public schools, although they have been long since abolished in the schools.

THE SCHOOL SINK.

The iron trough, or school sink, was almost an exact duplication of the brick and cement trough, except that they were made of various length and widths, and had a hollow iron plug with a rubber gasket at the outlet. This plug served as a trap and an overflow pipe combined. The water is held back in the school sink by the insertion of the plug in the outlet and the contents of the school sink are discharged in the same manner as described from the brick trough. The owners of tenement houses thought they saw in the school sink an ideal form of water closet, and as the general water closet accommodations were located in the yards at that time there is no doubt that they were vastly superior to the privy vault, or the stone or brick trough, and as they were approved by the board of health they were readily adopted and came into general use in this class of houses throughout the city, and there are to-day some twenty or thirty thousand in use all over the Greater New York in old-fashioned tenements. In many places an iron trough or school sink from ten to twelve inches in width and about the same in depth was placed in the privy house immediately under the water closet seats. These sinks had a lever handle attached to the plug by which the plug was raised and lowered as occasion required, and in the opinion of the writer, this was the best possible method for their employment, as the contents were easily and quickly discharged, and being so near the surface, were easily cleaned and painted. Why this method was abandoned is hard to say, but was probably due to the fact that the privy house, being exposed to the cold, the water and contents froze in the sink. However that may be, the majority in existence to-day are set down from five to eight feet below the surface of the yard. In this position they are an abomination and a serious menace to health. The wonder is that their use has been tolerated so long. When we consider that in the older sections of the city they are located in the yards and occupy the major portion of the space between large front and rear

tenements, five and six storeys in height, it will be readily seen wherein the danger lies.

A NUISANCE.

The writer has seen many that were within one foot of the windows of living rooms, depriving those rooms of the meager light and ventilation which might otherwise obtain. Then again, imagine if you can the awful stench arising from the discharge of these school sinks on a hot Summer day after the excreta from 25 or 30 families has been allowed to stand for weeks at a time through the negligence of a caretaker, and this from only one house; there are row upon row of such houses each with its stinking, nauseating school sink belching forth its vitiating odors, contaminating the air which thousands upon thousands of the poor of the city must of necessity inhale to the impairment of their health and bodily vigor.

To, in a measure, abate this nuisance, many owners caused a stench pipe to be carried to the roof of the building from above the school sink. I have found many cases where this stench pipe was broken or eaten with rust, and the awful stench therefrom pouring into the windows of living rooms on the upper floors.

Nor is this the only fault to be found with the school sink, especially the narrow ones. They were set so low in the ground that large quantities of the excreta adhered to the sides and rear wall which from time to time had to be scraped off.

Brick walls are usually built up from the top of the school sink to the level of the ground. These walls after a time become defective, causing ground saturation, and the seepage therefrom finds its way into the cellars, causing constant dampness, while rats and vermin of every description are forever present.

FREEZING AND FLUSHING.

The writer has found on many occasions the entire contents of a school sink frozen solid. Another grave danger lies in the method of flushing the school sink. This is usually done by turning a goose neck of lead pipe over and into the school sink, and simply turning on the water. On one occasion, while the writer was making repairs to the Croton pipe necessitating the shutting off of the water supply of the house, it was discovered that the tenants on the upper floors, where hand pumps were a necessity, were still able to pump water. Here was a puzzle. At first glance it seemed as if a by-pass existed or there was a connection with the adjoining house, but

a little investigating proved that the tenants were actually pumping up the liquid contents of the school sink through the goose neck connection.

This danger of contaminating the water supply is ever present where there are pumps, or even the shutting off of the water supply to the house may siphon the contents of the school sink out into the main, and as one of the causes of typhoid fever is attributable to an impure water supply it is easy to see how the health of a whole neighborhood may be placed in jeopardy by the presence of the school sink through its water supply. In the past twenty years I have worked on, and inspected thousands of school sinks all over the city, and in houses occupied by all classes of people, and it is with all seriousness and candor that I say I have never seen a school sink or so-called trough water closet that was absolutely clean and inoffensive, and I am firmly convinced that their construction and operation does not permit of their usage without detriment to the health of the community.

Thanks to the action of the Legislature of a couple of years or so ago their existence in the Greater New York is of short duration, for a law was passed requiring the removal of all school sinks prior to January 1, 1903, and the substitution therefor of flushing rim water closets, flushed from water supplied cisterns, which will measure up nearer to the standard of what we consider the sanitary requirements of the day, and which will afford to the humble tenement dweller a greater amount of purer air than he has ever enjoyed before.

CARTER BROS.' CALENDAR.

CARTER BROS., retail hardware and paint dealers, Picton, Ont., are sending out to their customers a handsome calendar, indicative of the chase. The calendar represents in colors the following of the hounds in the fox hunt, and the decorative design includes the fox's brush, the trophy of the chase.

Carter Bros. have sent out 2,000 of these calendars to the farmers in the neighborhood of Picton, together with a S.W.P. letter advertising the Sherwin-Williams paints, for which they are agents. The last order placed by Carter Bros. with the Sherwin-Williams people was for 123 cases weighing over 51-2 tons, thus showing what a large sale there is for these paints even in a town of 3,500 inhabitants.

Technical Book Reviews

Readers of **HARDWARE AND METAL** can secure any of the books referred to below at publishers' prices by writing to Book Department, **HARDWARE AND METAL**, Toronto.

Horseless Vehicles, Automobiles and Motor Cycles—A practical treatise for automobilists, manufacturers, capitalists, investors and everyone interested in the development, use and care of the automobile; by G. D. Hiscox, M.E.; 458 pages and 316 illustrations; price \$3.

This is a very complete treatise on horseless vehicles of all kinds including those propelled by steam, explosive gases, electricity and compressed air. The vehicles are discussed from many standpoints, including historical, the present day construction and the operation of vehicles.

The first five chapters are devoted to steam vehicles. The development of steam as a motive power is treated from its first use, and the different methods of employing it for the propelling of vehicles are touched on. A chapter is devoted to the present day appliances of steam, one to specialties in automobile construction and one to self-propelled vehicles and automobile carriages of the present day. In this last named chapter steam rollers, traction engines and different types of steam automobiles are discussed.

Seven chapters are devoted to vehicles with explosive motors, which are at the present time the most important type of automobiles. They are first briefly discussed from an historical standpoint, after which they are considered under the following heads: Electric ignition devices, atomizing carburetors, operating devices and speed gears, motive power and running gear. Considerable space is devoted to automobile bicycles and tricycles, but of particular interest

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is the section describing different types of gasoline motor carriages and vehicles.

The next part of the work is devoted to vehicles driven by electric motive power and vehicles operated by compressed air. These are discussed in as full a way as the steam and gasoline vehicles and in much the same style.

Compressed Air and its Applications—

A volume treating on the production, uses and applications of compressed air, comprising the physical properties of air from a vacuum to its liquid state, its thermodynamics, compression, transmission and uses as a motive power in the operation of stationary and portable machinery; by G. D. Hiseox, M.E.; fourth edition; 817 pages, 40 air tables and 545 illustrations; price \$5.

This is a most exhaustive treatise on compressed air, and should certainly prove a valuable book of reference on compressed air.

The first half of the book is devoted to the properties of air under all conditions, to the compression of air and to the consideration of the different types of compressors manufactured in America. Under the properties of air is discussed its physical properties in the natural state, its properties when in motion, and its force, its pressure below atmospheric pressure, its flow under pressure from orifices into the atmosphere, the power of the wind, its thermodynamics, its compression and expansion where the actual work performed by the compressor is considered and also the single and multi-stage systems of compression.

For the amount of information available on the efficiency of compressed air motors there is a very complete chapter devoted to the consideration of these engines.

The consideration of air compressors is taken up very minutely including both hydraulic compression, namely the compressing of air by a column of falling water, and mechanical compression. The air compressors described are: L. E. Rhodes Co., Hartford, Conn.; the Ingersoll-Sergeant Drill Co., the Laidlaw-Dunn-Gordon Co., the Clayton Air Compressor Works, Guild & Garrison, Knowles Steam Pump Works, Norwalk Iron Works, E. P. Allis Co., Curtis & Co., New York Air Compressor Co., Rand Drill Co., St. Louis Steam Engine Co., Philadelphia Engineering Works, Limited, Stellwell-Bierce & Smith-Vaile Co., Nordberg Mfg. Co.

The second portion of the work is devoted to the uses of compressed air, in which the use of compressed air in



A Merry Christmas and a Happy New Year

to all loyal S. W. P. Agents, whom we wish to thank for their co-operation during the past year. Next year—well next year, working together again, we will make the best record of our business history. It will mean 52 weeks of paint profits for full line S.W. P. Agents.

THE SHERWIN-WILLIAMS CO. PAINT AND VARNISH MAKERS
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mining and quarrying, in the machine shop and foundry, in pyrometry, in railway service and in many other services is considered. A very complete description of the principle and construction of all kinds of pneumatic tools, considering tools made by different manufacturers, is given.

This volume certainly covers almost everything in the compressed air line that anyone would wish to refer to.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Starr Skates.

THE Starr Mfg. Co., Dartmouth, N.S., have just issued their 38th annual catalogue of skates. This catalogue described and illustrates the

variety of kinds of skates manufactured by this firm. Among these are: The "Acme," a self-fastening skate, the curvature of which varies according to the quality, the higher grades having the greater curvature; the "Mic-Mac" hockey, made with plain runners with or without puck stop, flanged runners with or without puck stop, there being also the featherweight webbed; the "Starr" hockey, "the standard hockey skate of Canada;" the "Chebucto" hockey; the "Bracketed" hockey; the "Boys" hockey; the "Acadia;" the "Ladies' Beaver;" the "Starr Skeleton;" the "Starr Figure;" the "Starr Tube" hockey skate, and the "Improved Achieved."

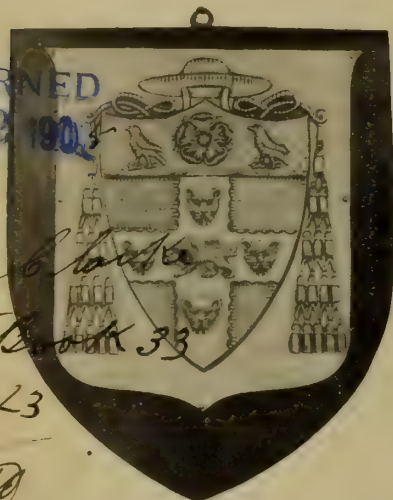
The Mic-Mac hockey stick is described and illustrated.

The catalogue also contains directions for the attaching of skates to boots.

NATIONAL AND COLLEGIATE COATS-OF-ARMS.

THE arms of one's country or one's college are always a source of pride to the patriot and the student. Ornamental reproductions are therefore highly prized. In this connection Ludlow & Fisher, Limited, stampers and piercers, of Birmingham England, are producing an attractive series of heraldic devices embossed in antique silver plated on copper, and mounted upon oaken shields. The designs are heraldically correct, bold and highly artistic in treatment, and as the shields are 15 1/2 by 12 1/2 inches, they are well adapted for wall decoration, either alone or in association with trophies, or as a centre for door draperies.

The series at present includes some 84 coats-of-arms of various countries, colleges and other institutions. These embrace the arms of Canada, the Uni-



Cote of Arms of Christ Church, Oxford.

versities and Colleges of Oxford and Cambridge, and of municipalities at home and in the colonies. Amongst others a shield bearing the arms of the McGill University, Montreal, is in course of preparation.

King Edward has honored Ludlow & Fisher with an order for shields bearing the arms of the Colleges of Oxford and Cambridge of which he is a graduate. That of Christ Church, Oxford, appears as an accompanying cut.

Shields suitable for shooting and athletic trophies are amongst the designs. The embossing is effected by a special process, and after plating, the surface is treated so as to be impervious to the atmospheric discoloration to which silver is liable. These coats-of-arms are handsome productions, and are having a great vogue, both on account of their heraldic accuracy and the moderate price

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Progressive dealers instantly recognized its value—the demand was spontaneous. As the result of extensive advertising there is already a large demand for this revolver.

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are signs that —————> point to the door of your competitor, who, being alert and keen, realizes that "New Things" impart life and activity to his business and who instantly recognizes the practicability and selling virtues of the

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at which they are produced. Readers who wish printed matter, quotations, or further information may receive same by writing the manufacturers at 83 Rea street, Birmingham, mentioning Hardware and Metal.

MORE POWER IN TORONTO.

Plans are being made to utilize the water power of the Credit River, for the purpose of supplying electric light and power to Toronto and Toronto Junction. The scheme is to tunnel during the present Winter from the dam, under Dundas street and under the village of Erindale, a distance of 900 feet. The opening to the tunnel will be 18 feet below the level of the water on the dam, and will have a head of 35 feet, when it can act on the other side of the hill. It is here the machinery for developing the power will be placed. Gates will be installed at each end of the tunnel, so that the water can be let out and the tunnel repaired when necessary. The latter will be built of brick and concrete. J. Barrett has purchased the property on both sides of the river and all the land will be flooded by the dam, which is now arable land. The cost of

the scheme will be \$250,000 and from 20,000 to 50,000 horse-power will be generated.

CANADA CAR CO.

At a meeting of the Canada Car Co. this week at Montreal, a strong board of directors was secured. The company was organized at its head offices in the Board of Trade building. The directors are as follows: Sir H. Montagu Allan, of the Allan Steamship Co.; H. S. Holt, president of the Montreal Light, Heat and Power Co.; E. L. Pease, general manager of the Royal Bank of Canada; Frederic Nicholls, general manager of the Canadian General Electric; F. N. Hoffstot, president, and J. N. Friend, vice-president of the Pressed Steel Car Co., and W. P. Coleman, ex-vice-president of the American Car and Foundry Co.

W. P. Coleman was appointed president and general manager, and under his guidance, and with the benefit of his extensive experience, the company has every prospect of success. Already over \$300,000 worth of contracts have been secured in the face of keen competition from the United States and Canada.

H. S. HOWLAND, SONS & CO. LIMITED

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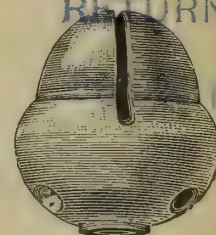
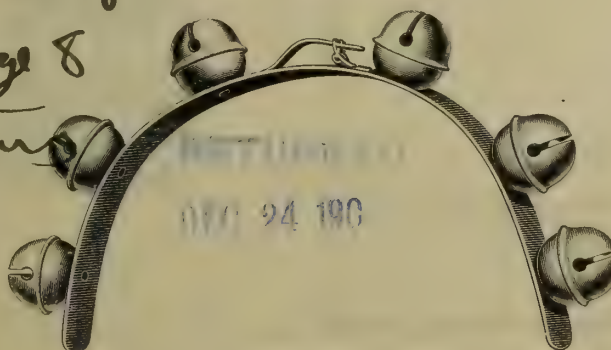
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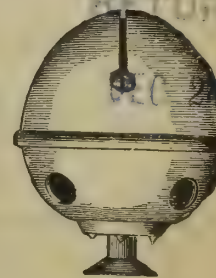
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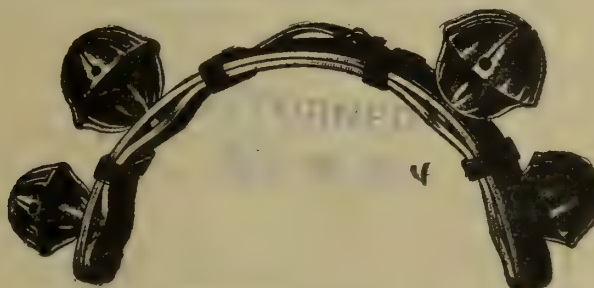
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110. 4 Bells, 2½ in. dia., Back Strap 2 in. wide.
111. 6 " 2½ " " "
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SWEDISH SLEIGH BELLS



With Straps 18 inches Long

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469. 2 Bells each, Nos. 7 and 11, Polished.
477. 2 " " 9 and 13, Rough.
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Straps 26 inches Long

Two straps in a box



SHAFT BELLS.



SHAFT BELLS

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Homes where is used freely Gillett's Lye are happy homes. And if you have helped to put into every customer's home Gillett's Lye, your customers and ourselves wish you The Merry Christmas you deserve.

E. W. GILLETT COMPANY LIMITED
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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Dec. 23, 1904.

USUALLY at this season there is an easing off in the demand for plumbing and heating supplies, but trade continues brisk, giving the supply houses all they can do. Soil pipe and fittings, orders for which

generally stop almost altogether about the first of December, are moving well. In iron pipe there is every indication of an early advance, but as yet no change has been made. Other lines continue active with prices as before.

Range Boilers—The number of these shipped during the season compares very favorably with that of other years. Quotations are as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—The market in lead pipe continues very active and the lead market being somewhat easier the expected advance in price has not been made. Discount 30 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—An unprecedented volume of business for this time of the year continues in soil pipe and fittings, as trade in these is generally over at this season. We quote: Soil pipe, standard, 50 per cent. and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—A very large number of orders continue to be placed for iron pipe fittings. The market is strong with prices unchanged. Discounts on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—There is every likelihood that within the next few weeks a material advance will take place in iron pipe, in which at present the market is very strong. There is a big demand. We quote: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,

10 Front street east,

Toronto, Dec. 23, 1904

CONTRACT heating and plumbing work has almost ceased. A fair amount of assorted orders are being received by the wholesale jobbers which shows that the class of work being done now is of the jobbing nature.

Local dealers are anticipating a good trade in lead pipe. During the past week there has been a good local demand for iron pipe and fittings, which were used for heating purposes in wholesale warehouses. Trade is expected to be quiet till the opening up of the building trade next Spring, although some dealers are looking forward to booking orders after the first of the year, shipments to take place about the first of April.

Lead Pipe—Trade conditions continue unchanged. Demand is fair, and prices continue unchanged. We quote: Lead, 7c; lead waste pipe, 8c; discount 30 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—A fair demand is current. Prices are firm and unchanged. We quote nominally: Malleable fittings 20 per cent. for American and 35 per cent. for Canadian; cast iron (standard), bushings, 65 per cent.; headers, 60 per cent.; flanged unions, lipped, 60 per cent.; malleable bushings, 57 1-2 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—Trade is quiet. The discount continues unchanged at 15 per cent.

Galvanized Iron Range Boilers—Trade is quieter. Prices are firm and continue unchanged. Our quotations are: 12 gallon capacity, standard, \$4.50; extra heavy, \$6.50; 18 gallon, standard, \$4.75; extra heavy, \$6.75; 24 gallons, standard, \$4.75; extra heavy, \$6.75; 30 gallons, standard, \$5; extra heavy, \$7.50; 35 gallons, standard, \$6; extra heavy, \$8.50; 40 gallons, standard, \$7; extra heavy, \$9.50; 52 gallons, standard, \$11; extra heavy, \$14; 66 gallons, standard, \$18; extra heavy, \$20; 82 gallons, standard, \$21; extra heavy, \$24; 100 gallons, standard, \$29; extra heavy, \$34; 120 gallons, standard, \$34; extra heavy, \$40; 144 gallons, standard, \$47; extra heavy, \$55.

Iron Pipe—A good trade continues. The market is steady. Prices continue unchanged. Our quotations are: Black, 1-4 inch, \$2.04; 3-8 inch, \$2.06; 1-2

inch, \$2.30; 3-4 inch, \$2.88; 1 inch, \$4.13; 1-1/4 inch, \$5.63; 1-1/2 inch, \$6.75; 2 inch, \$9. Galvanized, 1-4 inch, \$2.86; 3-8 inch, \$2.89; 1-2 inch, \$3.15; 3-4 inch, \$4.03; 1 inch, \$5.78; 1-1/4 inch, \$7.88; 1-1/2 inch, \$9.45; 2 inch, \$12.60.

Solder—Market strong and prices firm. We quote: Bar solder, half and half, guaranteed, is quoted at 17 3/4c; wiping solder at 15 1/2c, and refined 16 1/4c.

Enamelled Ware—The following quotations on Standard Ideal enamelled

ware are given: Baths, rolled rim 51-2 feet, 21-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 21-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D A quality, \$5.20; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

WELL EQUIPPED PLUMBING ESTABLISHMENT.

SEVERAL names stand out prominently in connection with the plumbing trade in Canada, and amongst them is that of J. W. Hughes, of Montreal. The original concern from which the present firm of J. W. Hughes & Son has sprung, was started in 1860 under the name of Richard Paton, marking it as a pioneer amongst plumbing firms of this country. In 1878 Hughes & Ste-

ent senior member was the first apprentice of the original firm.

Progress has been the policy of this establishment since its inception; and the handsome building just completed, of which a view is given, shows to some degree how success has marked its course. The first shop was opened in a small building on the corner of St. Lambert's Hill and Fortification lane,

which is also used for storing heating apparatus, is a large steam boiler for heating purposes, and a fifteen horsepower gas engine. The latter is used for power for the mechanical department, and has been in successful operation for fifteen years. The ground floor contains the general and private offices, the stock room, pipe shop and machine shop. The machine shop is equipped with two screwing machines for threading pipe from one quarter to eight inches is diameter, drill press, forge and tools and grinding machinery, while in the stock room is a full assortment of plumbing supplies. Many lines in connection with the business are manufactured on the next floor, where room is allotted to the brass-finishing department, tinsmiths, copper and plumbing shops. A very complete electrical department occupies the top storey. The firm has made a specialty of this, as it harmonizes with the general plumbing business, and they undertake all ordinary electrical installations. Altogether the building possesses a handsome and complete appearance and is a credit to the proprietors.

Among some of the larger contracts satisfactorily filled by the company might be mentioned the Place Viger hotel and station, C.P.R. Windsor station and general offices, Grand Trunk station, Board of Trade Building, Guardian Insurance Building, United Shoe Machinery Factory, Stonewall Jackson Cigar Factory, Standard Shirt Factory, and many others of equal importance.

Mr. J. W. Hughes was one of the main organizers of the Dominion Plumbers' Association and has been actively associated with it from the start, having occupied nearly all the higher executive offices in turn. Last year he resigned from office in the association, but was followed by his son, Mr. W. R. J. Hughes, who has already shown himself to be a worthy exponent of the trade of his father, and who is at present vice-president of the association for the Province of Quebec.

Water in Lead Tanks.

WHILE the dangers of allowing water supplies for drinking purposes to come in contact with lead fittings is so much under discussion in this country, it is of interest to observe the view of the subject taken by an American contemporary. There are many lead-lined tanks in use in various sections of the States, from which water is taken for drinking purposes, and from which no disadvantages have been suffered, but there is always



The New Premises of J. W. Hughes & Son, Montreal.

phenson took over the business, which was run under that title for seventeen years, when Mr. Hughes succeeded as sole proprietor. After running the business for seven years under his own name, his eldest son, W. R. J. Hughes, was taken in as a partner and these two constitute the personnel of the firm today.

An interesting fact might be mentioned in connection with this firm whose career has been successful from the start. The first journeyman plumber in the employ of the late James Paton has been in the establishment ever since, and is still actively engaged; and the pres-

since demolished. Then a move was made to larger quarters at 742 Craig street, and from there across the road to No. 743, followed by changes to 745 and 747, at each turn more accommodations being sought. Business was next continued for a good many years at No. 2 St. Antoine street, until the last step was taken, the firm's address now being 2 and 4 St. Antoine street and 709-711 Craig street.

The new building is a solid brick structure on a stone foundation, consisting of three storeys and a basement, and having a floor surface on each flat of 2,700 square feet. In the basement,

PIPE THAT IS PIPE.

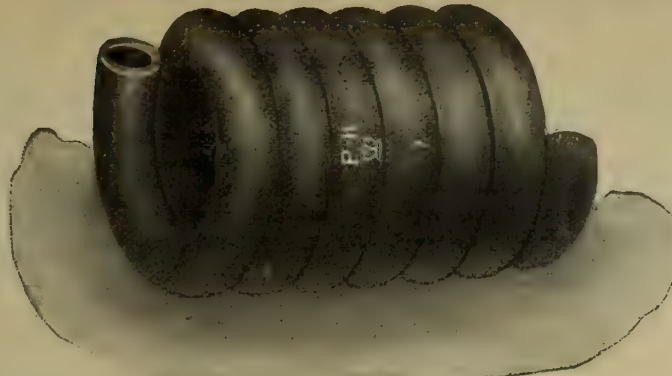
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See that You Get It.



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TAKE NO OTHER.

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Have you
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Tried what?

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MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

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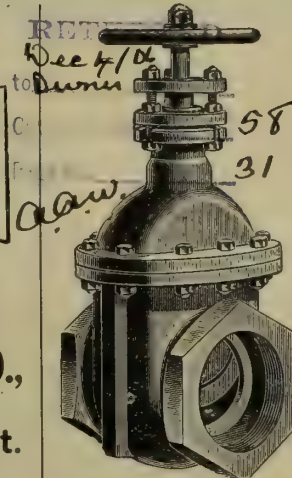
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LIMITED.

BRASS MFRS.

Windsor, Ont.



**BUY
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VALVES.**

They give
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every time.
Catalogue
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The Kerr Engine Co
LIMITED

Walkerville, Ont.

THE MODERN PLUMBER'S STOCK

is not complete without the Morrison Specialties—low and reasonably priced articles for the Bathroom, which are necessities in every home, which sell quickly and which offer a big margin of profit.

The Nethery Patent Flush Valve

Which does away with the closet tank.

The Morrison Folding Sanitary Urinal

In cast aluminum and nickled connections; hygienic and sensible.

Superior Lighting Fixtures

And remarkable values in plumbing equipment. We also carry:

"Remanit," the Fuel Saver

Saves 25 per cent. more heat than any other pipe covering on the market: and

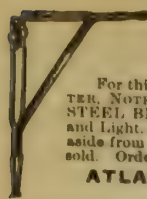
Thompson's Famous Smoke Machine

The only sure leak finder.

WRITE FOR CATALOGUE OF THE LINE IN WHICH YOU ARE INTERESTED.

WE HAVE SEVERAL SPECIAL PROPOSITIONS.

The James Morrison Brass Mfg. Co., Limited
TORONTO, ONT.



Will Hold Up a Shelf!

That's what a shelf bracket is for. For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,
New Haven, Conn., U.S.A.

R. E. THORNE, 768 Craig St., Montreal.

BRONZE POWDERS,
BRONZE LIQUIDS,
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Plumber,
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should send postal card
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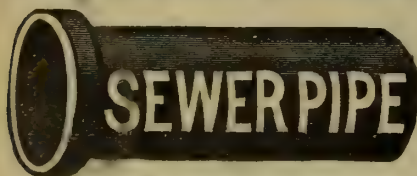
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TORONTO

... FULL STOCK ...

Salt Glazed Vitrified



Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

JARDINE PATENT PIPE DIES

Make Hard Work Easy.



The Herbert Jones Co., Steamfitters, Hamilton, Ont., say:—With this Die one man is quite capable of accomplishing what formerly took two men to perform.

A. B. JARDINE & CO.

Mfrs. TAPS and DIES.

HESPELER - - - ONTARIO

a possibility that, under certain conditions, some person might absorb a sufficient quantity of lead to have his health affected by it.

Some effort was made in New England a short time ago to abolish the use of lead pipes for plumbing systems, and to have tin-lined lead pipes substituted, in order to avoid any possibility of lead poisoning. The fact, however, that lead pipe was so generally used throughout the United States for carrying water, with practically no disadvantage, was sufficient evidence that there was no need for a change. Consequently the movement attracted very little support or attention except on the part of those who could afford and were willing to stand the additional expense of tin-lined lead or tin-lined iron pipe for their water supply systems.

There is no difficulty in painting a lead-lined tank, either with asphaltum

varnish or some form of paraffin paint, which would entirely protect the lead from action by the water and the water from dissolving the lead to the extent of bringing about lead poisoning among those who drink it. The different manufacturers of sheet lead can, on special order, furnish block tin in sheets, but this sort of lining would be unnecessarily expensive, and practically the same assurance of a safe water supply could be secured by the use of tin-coated copper. Tinned copper has been extensively used for lining tanks from which water is to be drawn for drinking purposes. When block-tin sheets are used, a special solder is provided, into which a small portion of bismuth is mixed, so that the solder melts at a lower temperature than usual, and can be used with the ordinary soldering copper by the skilful man with very little risk of melting holes in the block-tin sheets.

THE PRESENT CONDITION OF THE PLUMBING SUPPLY MARKET.

A PROMINENT dealer in plumbing supplies, interviewed by a representative of Hardware and Metal, has made a lengthy statement on the subject of the shortage in certain lines of plumbing goods. "During the past Summer there has been an unprecedented stir in the building trade throughout Canada," said he. "The number of dwellings, warehouses and factories erected has never before been equalled, and they have all required the attention of plumbers. Notwithstanding these favorable prospects, the plumbing merchant has been harassed by a scarcity of labor and a dearth of supplies in certain lines, especially iron pipe and solid porcelain-lined baths. The majority of articles, such as cast iron fittings, solder and lead pipe, are being manufactured by such a number of different firms that the supply is fully equal to the demand. Malleable iron fittings are being manufactured by only one firm, but that firm is taking steps to increase its output. However, the supply of solid porcelain enamelled baths and iron pipe seems strangely inadequate compared with that of the other articles in this line of business.

"Owing to the difference in price between the American and Canadian manufactured bath (solid porcelain lined) the majority of Canadian merchants are relying almost absolutely on the Canadian manufactured article to supply the trade. The baths referred to are manufactured at one plant, and the output of this plant seems at present quite unequal to the demand.

"With iron pipe the situation is

slightly different, although the existing troubles are based somewhat upon the same grounds as those of porcelain baths. On account of the small dimensions of the plants, of which there are two, the Canadian manufacturers are only able to manufacture sizes up to 2 inches; all larger sizes have to be imported direct from the United States, or through agents at Montreal.

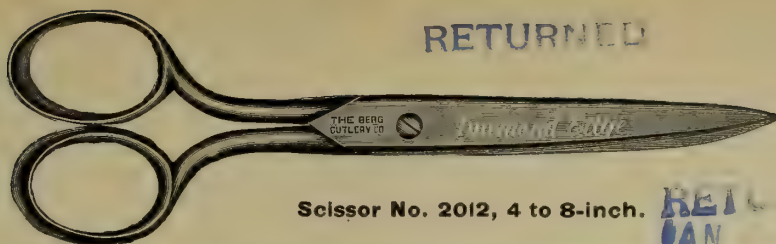
"Owing to the heavy duty on pipe, namely, 35 per cent. on sizes up to 2 inches, and 15 per cent. on larger sizes, it brings the price of imported material, of which there is a large amount, to a very large figure. However, only small quantities of the smaller sizes are imported, owing to the exceptionally heavy duty (more than double that on the larger sizes, which the Canadian manufacturer does not make).

"The kind of order that proved to be so disastrous during the last season was the assorted order, which is being received continually. Because some of the rare sizes are not kept in stock, the wholesaler has to hold over the order until he receives these sizes. This may take a few days or it may take two weeks.

"When the cause of the present conditions is considered the extraordinary number of personal, as well as written, complaints that are daily being received by the wholesale jobber from his customers cannot be wondered at."

Plans have been prepared by Parr & Fee, of Vancouver, for the erection of a business block in that city which will cost in the neighborhood of \$40,000.

A★1
Trade Mark



Scissor No. 2012, 4 to 8-inch.



Trade Mark



Paring Knives No. 5002, Rivetless Handle.

F. W. LAMPOUGH & CO., - MONTREAL.

To Manufacturers' Agents:

HARDWARE AND METAL has enquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of enquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager

HARDWARE AND METAL

Montreal and Toronto

WHY DON'T YOU BUY...



**Rex
Flintkote
Roofing**

affected by vapors of acids or alkalis. It costs less than shingles, and can be laid by anyone. Our book tells more about it, and will be sent free, with samples.

J. A. & W. BIRD & CO.,
49 India Street, Boston, Mass.

Rex Flintkote Roofing is used on thousands of buildings in the U. S. and Canada, and is fast becoming the universal roofing.

"LOOK FOR THE BOY" ON EVERY ROLL

NOBODY DISPUTES IT

The International Stock Food Co., the richest and most responsible stock food concern in the world, have really no competition.

INTERNATIONAL STOCK FOOD

is the best food in its class. Farmers and stockmen have proved it. We help our agents sell our food in matchless style. An agency for us is a "good thing."

WRITE FOR TERMS AND PLANS

INTERNATIONAL STOCK FOOD CO.
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CANADIAN CORDAGE & MFG. CO., Limited

CORDAGE

OF EVERY DESCRIPTION.

**MANILA ROPE,
SISAL ROPE,
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BINDER TWINE:

**SISAL,
STANDARD,
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All qualities and lengths, 500 ft., 550 ft., 600 ft., 650 ft. to the pound.

We guarantee our goods to be absolutely Pure and free from all substances calculated to increase weight. Consumers will find on careful test that our goods are the Most Economical, Highest quality, Low prices.

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LIMITED

PETERBOROUGH, ONTARIO, CANADA

Overhauling Plumbing Fixtures.

P LUMBERS who conduct business in places used as Summer resorts, where there are buildings that are unused in the Winter season, can utilize the time when these houses are being opened to prepare for a little profitable business, says a writer in the Plumbers' Review. Whenever a building is unoccupied for some time, there is a strong probability of the seals of the traps of the various fixtures becoming broken or evaporated, so that they no longer form a bar to the entrance of air from the cesspool or sewer, laden, possibly, with dangerous germs. A circular distributed at this time among the owners and occupants of such buildings can be used to apprise them of this danger, and to recommend that the care of the fixtures at the time the house is again closed be put in the hands of a competent plumber, who can use glycerine or kerosene to fill the traps in the fixtures, from which the water seal is taken out by means of a syringe or an air pump.

When fixtures are treated in this way the seal is reasonably permanent, and there is no danger whatever of a circulation of air from the cesspool or sewer passing through the waste pipes into the various rooms that will be occupied during the Summer. This little precaution, which can be secured at a comparatively trifling expense, is an insurance against any possibility of the carpets, wall paper or furnishings becoming culture beds for such germs as could readily pass through the fixtures if the trap seals are evaporated. A circular of such character could also be used as a means of bringing in orders for repairs to ball cocks, bath bibs, basin cocks, and other fixtures that might need new washers or some attention at the hands of an expert plumber.

Death of a Veteran Plumber.

A FAMILIAR figure in Toronto plumbing circles passed away on December 10, in the person of Mr. John Wright, who for nearly fifty years conducted a plumbing establishment in that city. The deceased gentleman was born in Glasgow, Scotland, on September 24, 1836, and at the age of twelve crossed the Atlantic, settling in New York. Here he spent five years, by the end of which time he had become a thoroughly efficient plumber.

In 1854 he came to Toronto and for eight months worked as a plumber in the employ of Cumming & Wells. This firm were the leading plumbers of that

day and had contracts for all the Government work. But Mr. Wright was ambitious and, though only a youth of nineteen, he presently branched out for himself. He rented a store and hung out his sign at the corner of Gerrard and Yonge streets, and began that long career of usefulness, which only terminated with his death.

When the first plumbers' association was formed in Toronto, Mr. Wright took an active part in its organization, accepting the office of vice-president and holding it during the infancy of the association. Since then, though not actively interested in association work, he has always been in sympathy with the movement.

Mr. Wright was for some time a mem-



The Late John Wright.

ber of No. 3 Company of the Victoria Rifles, now the Queen's Own Rifles, becoming in time drill instructor for his company. He was also in the sixties a member of No. 2 Independent Fire Brigade. Since those days of early activity he lived a quiet life, attending conscientiously to business and winning the esteem of his neighbors and customers. He has been succeeded in the business by his son, John M. Wright.

Building Permits.**TORONTO.**

T. P. Whitlam, dwellings, Nos. 110 to 116 Caroline avenue, \$5,500.

Geo. Keen, stores, College street, near Ossington avenue, \$5,000.

Jos. H. McGregor, dwelling, Crescent road, near South drive, \$6,000.

Geo. A. Waddell, dwelling, Leslie street, near King street, \$1,000.

McGregor & McIntyre, office, Pearl street, near York street, \$2,000.

A. H. Tandy, dwellings, Millicent street, near Dufferin street, \$2,400.

Wm. Hodgkinson, dwelling, Bolton avenue, near Gerrard street, \$1,500.

Mrs. H. N. Briggs, dwelling, Markham street, near Bloor street, \$3,600.

J. B. Le Roy & Co., dwellings, corner of Broadview avenue and Elliott street, \$3,600.

Mrs. M. A. Armstrong, dwelling, corner Euclid avenue and Harbord street, \$5,000.

Osler & Hammond, alterations to office building, corner of Jordan and Melinda streets, \$8,000.

E. McCormack, alterations to club house, corner of Dundas street and Sheridan avenue, \$2,000.

Building Notes.

The town of Walkerville, Ont., is to have a new school house costing \$50,000.

A new saw mill with a daily capacity of 25,000 feet is to be erected at La Vallee, Ont.

A steel and concrete bridge is to be built across the Sydenham River at Owen Sound.

A new rink 150 feet in length and costing \$3,000, will be erected at Qu'Appelle, Assiniboia.

Montreal Rolling Mills, Montreal, have purchased property with the intention of extending their buildings along the Lachine canal.

Magann & Phin, of Toronto, have been awarded the contract for the removal of the central pier in the Welland canal at Allanburg and Marlatt.

Grant & Harrison, architects, of Vancouver, are busily engaged preparing plans for the erection of several large business houses in that city, in the near future.

Thos. Kelly, of Winnipeg, has received the contract for the construction of a new post office, which will be erected in that city, costing in the neighborhood of \$529,000.

Allis-Chalmers & Co., architects, of Milwaukee, have prepared plans for the construction of a flour mill with a capacity of 5,000 barrels for the Kewatin Flour Mills Co., at Winnipeg.

BLAST FURNACE CHILLED.

A despatch from Sydney says the blast furnace of the Nova Scotia Coal and Steel Co., at Sydney Mines, is chilled, and as a result the production of pig iron is stopped. It will cause considerable loss to the company.

Business Changes

ONTARIO.

Mrs. O. Smith's planing mill, Wroxceter, is advertised for sale.

Wm. A. Malone, wagonmaker, Dutton, has assigned to James Pool.

The foundry of the Canadian Copper Co., Copper Cliff, has been burned.

R. B. McKee, president of the Peterboro Hardware Co., Peterboro, is dead.

QUEBEC.

T. Viau, contractor, Hull, is dead.

A. I. Wallace, builder, Waterloo, is dead.

The Royal Foundry Co., Montreal, have dissolved.

Noel Paquet, tinsmith, Montmagny, has compromised.

Jos. Poliquin, hardware merchant, Montreal, is dead.

Peladeau & David, painters, Montreal, have dissolved partnership.

Frigon & Lavoie, contractors, Montreal, have dissolved partnership.

Bertrand & Chagnon, contractors, Montreal, have dissolved partnership.

Hermenegilde Baigne has registered as Geoffrion & Cie., hardware merchants, Montreal.

The assets of the Maisonneuve Engine Works, Montreal (Maisonneuve), have been sold.

E. W. Rathbun has registered as president of the Canadian Portland Cement Co., Montreal.

Bilodeau & Chalifoux have been appointed curators to J. Odilon Godin, tinsmith, St. Flore.

The assets of Authier & Charette, saw mill owners, La Macaza, have been sold to Pariseau Frere.

The Peat Coal Co. of Canada, Limited, St. Johns, is in liquidation; Chas. Arpin is provisional liquidator.

The assets of Adelard Bergeron, hardware merchant and wire fence manufacturer, Iberville, were sold Dec. 21.

Arthur Galarneau and Edmond Galarneau have registered as Galarneau & Frere, implement manufacturers, Pont-rouge.

Jos. Bergeron and Evariste Lecompte have registered under the style of Jos. Bergeron & Co., lumber merchants, St. Leonard.

Hubert Cadieux and J. H. Bouchard have registered under the style of Cadieux & Bouchard, grocers and hardware merchants, St. Johns.

MANITOBA AND N.W.T.

W. A. R. McLean, harness merchant, Lumsden, has been burnt out.

W. J. Doyle, hardware merchant, Clan William, has been burned out.

J. R. McDonald, blacksmith, Swan Lake, has sold to Clive & Lindy.

Gibson & Drennan, implement agents, Alameda, have dissolved partnership.

Smith & McDonald, dealers in agricultural implements, Carman, have sold to Saunders & Anger.

BRITISH COLUMBIA.

Wm. LaBarre, painter, Grand Forks, is removing to Bremerton, Washington Territory.

TRAVELERS' BANQUET.

The banquet tendered their salesmen by Lewis Bros. & Co., of Montreal, on Saturday last, was an enjoyable affair, arrangements for the details of which were carried out under the direction of Capt. C. W. Strange, salesmanager of the company. It was held at the Engineers' Club on Dorchester street, at which, through the courtesy of the genial head of the sales department, the travelers were guests during their stay in the city. Mr. Strange occupied the chair, with Mr. F. O. Lewis at his right, and Mr. J. C. Lewis at the left. Mr. H. H. Clark occupied the position of vice-chairman, with Mr. C. F. Smallpeice at his left. During the evening presentations were made of a large oak-framed group photo of the travelers to the firm, and handsome meerschaum pipes to Mr. Strange and Mr. Smallpeice.

A PROMOTION.

The many friends of Mr. J. R. Kinghorn, general sales agent of the Montreal Rolling Mills, will be pleased to learn of his advance as an official of the company. In addition to retaining his former office he has been promoted to the position of assistant to the general manager, Mr. Wm. McMaster.

INTERESTING VISITOR.

Mr. E. W. Wilkinson, representing Harrison Bros. & Howson, manufacturing cutlers and silversmiths, of Sheffield, England, arrived in Canada within the past week and was an interesting visitor at the Montreal office of Hardware and Metal. He expects to spend several weeks here, and will call at all the principal cities during his stay. Mr. Wilkinson stated that the British manufacturers appreciated the recent dumping clause passed by the Dominion, and were in general in sympathy with it.

IMPORTERS. ATTENTION

Save money by consigning your importations direct to destination and pay through freight charges only. Have your goods cleared and distributed by

Turnbull & Henderson

Customs Brokers, Forwarding and Distributing Agents, Vancouver, B. C. Satisfactory service guaranteed.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

BUSINESS CHANCES.

FOR SALE—A hardware, furniture and undertaking business for sale in a thriving town in Eastern Assiniboia; stock about \$6,000; property between \$4,000 and \$5,000; turn over for 1904, (11 months) \$23,000; tinshop in connection; good reasons for selling; going west for health. F. G. Elliott, Gainsboro, Assa. (52)

FOR SALE.

PATENTED hardware specialty for sale; number of Canadian patent 87136, May 10, 1904, United States, 753165, Feb. 23, 1904; there is a large market for this article; only parties interested need apply, address R. H. Rusden, Rossland, B. C. (51)

WANTED.

FLAT WANTED in Toronto; floor space 3,000 or 4,000 square feet. Address Box 204, HARDWARE AND METAL, Toronto. (51)

SITUATION VACANT.

WANTED—At Winnipeg, at once; hardware clerk with four or five years experience in wholesale store; must be well educated, and of good address. Apply stating salary expected. J. M. Howells, Box 1233, Winnipeg, Man. (52)

SITUATION WANTED.

WANTED—Energetic young man with ten years experience in hardware, iron and steel, supplies, etc., now employed; wants position with A1 firm, in charge or as travelling salesman; good references. Box 201, HARDWARE AND METAL, Toronto. (53)



WELLAND CANAL

Tenders for Supplies for the year 1905.

SEALED TENDERS for Supplies, addressed to the Superintending Engineer, Welland Canal, St. Catharines, will be received until 16 o'clock, on Tuesday, the 3rd of January, 1905, for the supply and delivery of various articles of Timber, Hardware, Castings, Fuel, Paints, Oils, etc., for use on the Welland Canal and its branches for the year 1905.

Specifications, forms of tender and other information may be obtained at the Superintending Engineer's Office, St. Catharines, on and after Monday, the 12th December, 1904.

The lowest or any tender not necessarily accepted.

By order,

L. K. JONES,
Secretary.

Department of Railways and Canals,
Ottawa, 5th December, 1904.

(53)

We make Electric Fixtures, Sockets and Cut-Outs

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

ELECTRICAL SUPPLIES.

Registering Telephone Calls.

A NEW device for registering telephone calls has recently been placed on the market. This instrument is designed to be placed at the sub-station and used for the benefit of the subscribers. When a connection is made the calling party pulls the lever, which throws a buzz over the wire, notifying the operator that he has registered. This call is shown on the face of the meter. At the end of a certain period, when it is required to take statements, the record taker or central office machine is placed in connection with the sub-station device. The party is called and asked to turn the crank. This operation makes a statement on a

the subscriber would be handled essentially as follows: Subscriber turns his magneto and sends a calling current over the circuit. The operator, upon receiving this call, places a connecting plug into the jack corresponding to the fallen shutter, cutting in her telephone set and making her usual inquiry. After leaving the number of the line with which the calling subscriber desires to be connected, the operator proceeds to ring the called-for subscriber's bell. The moment that the latter responds, and before putting the subscriber in communication to carry on their conversation, the operator requests the calling subscriber to pull down the recording lever, and upon his complying with this request the buzzer operates, notifying the operator that the subscriber has complied with the request.

In order to read the calls of the subscriber at the central office, a switching plug is installed with an ordinary telegraph relay in series, with 10 or 15 cells of dry battery. In addition to this the contacts of the relay are connected to the magnet and battery of a standard telegraph register. With this apparatus the short circuiting of the connecting plug results in the telegraph relay pulling up its armature and closing its local circuit comprising the telegraph, register, magnet and battery. As long as the plug remains short circuited the telegraph relay remains drawn up and the telegraph register produces an intact on the tape.

Building Industrial Motors.

THE Consolidated Electric Co., Yonge street, Toronto, are commencing the manufacture of induction motors in anticipation of the use of the electric current from Niagara. In Toronto the outlying districts of the city will be supplied with alternating current, and it is for this current the induction motors are being built. The main parts of the city will be supplied with direct current at a voltage of 500 for all motors over 10 horse power.

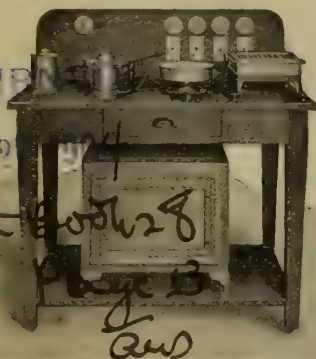
They are also contemplating building induction motors for the alternating current as delivered at other cities. Of course the motors for the different cities will be different in design, because of the difference in voltage, and also in phase.

In order to have a standard for the testing of the different styles of induction motors, they are at present building a standard machine.

The induction motors are for the most part of the ordinary design, although there are some special features designed to give additional efficiency.

Electricity in Farm Work.

Some facts and figures are given by the Electrical Review, showing the result of experimenting with electricity, which demonstrates that farmers can



Kitchen Heating Table.

tape by Morse code at the central office of the number of calls made since the last reading.

Where the apparatus is used with a local battery magneto call service, the subscriber's station instruments consist of the regular telephone equipment, with the addition of a meter. The circuits at the sub-station are so arranged that when the telephone user draws down the call recording lever it results in short circuiting the line several times in quick succession. At the central switch board the line circuits are not changed in any way from existing conditions, nor are the cord contacts changed in any respect. From a limited call station line a call to central from



Electric Coffee Pot.

make the electric motor take the place of human and horse labor on their farms in many instances. The following figures show the comparative cost of farming with electricity and by manual labor: Cost of installation of electric motor, \$500; cost of power furnished, about \$30, and repairs \$10, making a total of \$540. On the other hand, the cost of one farm hand for wages for one year at \$25 a month is \$300; cost of board and lodging same at 50c a day, \$185; cost of team of horses at \$125 each, \$250; cost of feed for same, five acre land production for one year, \$200; cost of shoeing, veterinary service, repairs, harness, etc., \$25,

which makes a total of \$960. This gives a balance in favor of electricity of \$420. It was found that one 15 h. p. motor would do about the same work as one man and two draught horses. The country on which these experiments were made is about 30 miles long and 18 miles wide.

RECENT PATENTS.

A complete record of patents recently granted to Canadian inventors, in Canada and United States, has been furnished Hardware and Metal by Messrs. Fetherstonhaugh & Co., patent barristers, solicitors, etc., head office Bank of Commerce Building, Toronto:

Canadian Patents—A. H. Switzer, lace fasteners; W. S. Hambrook, animal traps; H. R. Dils, C. I. Kelly, hand seeders; R. A. Gibb, O. W. Gibb, knife case racks; W. Lamont, combined chair and couch; A. L. Casselman, flower pots; I. Deachman, milk can hoists; W. J. Clokey, binding mechanism for binder machine; W. Whiteford, grain measuring apparatus; G. B. Southaayd, vehicles; W. Thompson, draw sections for casket cabinets.

U. S. Patents—John Ayling, weight holder for vehicles; Sigurd Bjarnason, bag fastener; Thomas Cosens, exhausting or testing tank; Joseph Hamel, A. Hardy, wire working implement; Tony Silvene, block signal system.

MECHANICS' SUPPLY CO.'S CALENDAR.

The Mechanics' Supply Co., Quebec, are sending out a large size calendar, 10x14 inches, in colors. The decorative part of the calendar consists of a colored illustration of their fine new building on St. Paul street, Quebec. The calendar part is large and very clear, thus making a very useful office or warehouse calendar. This firm handles all kinds of supplies for mechanics, including plumbing materials and sanitary appliances, electric fixtures and supplies of all kinds, engineers' tools and supplies, garden and fire nozzles, couplings, reels, hose, etc., pumps, iron pipe and fittings.

All reading matter on the calendar is printed in English and French.

THE MARLIN DESK CALENDAR.

By sending name and address and enclosing a stamp to the Marlin Fire Arms Co., New Haven, Conn., that firm will send any reader of Hardware and Metal, without charge, one of their desk calendars for 1905. This annual souvenir has now become a feature of the holiday season that hundreds of sportsmen welcome regularly, and among the sporting goods trade there is hardly an office where one or more desks do not have their handy nooks reserved and occupied with the current issue. The 1905 design is entitled "A Great Shot," and tells a story that any lover of the woods will understand and enjoy developing the details of from his own experiences. The treatment is novel, the work well done, the size convenient, the calendar useful. Send your name to-day to the Marlin Co.

This is the tag wire. An ab-tee is behind that bears it. out of every it next season.

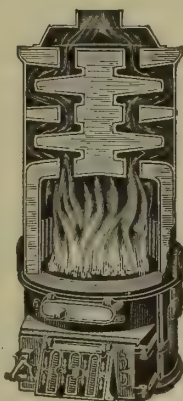


that sells your solute guaran-every bundle Nine farmers ten will ask for Why? Because we are telling them all about it through our extensive advertising. Buy wire that sells best. Make quality the first consideration and success is assured.

Our factories at London and Cleveland give us ample capacity to handle all orders promptly. Hold your orders for us; you will not regret it.

THE LONDON FENCE MACHINE CO., Limited.

LONDON, ONT., and CLEVELAND, OHIO.



LONG FIRE TRAVEL

in a hot water boiler is one of the things most to be desired. Note the long fire travel in the accompanying cut.

THE ECONOMICAL HOT WATER BOILER

embodies all the best things known in hot water boiler construction.

Agents Wanted. Send for Catalogue.

P. GIES, Founder, BERLIN, ONT.



When Christmas is over New Year's Gifts Rule.

FOR HOLIDAY DECORATION OUR ELECTRIC OUTFITS ARE UNSURPASSED.

For Chinese Lanterns, Floral Decoration, Mantels and Tables, our electric outfit saves the danger of fire. They are just the thing for the holiday trade. Order some to-day and they will be delivered Monday or Tuesday. No danger whatever. They may be had with battery attachment or for direct connection to electric light wires.

PRICES ON APPLICATION. SEND FOR CATALOGUE No. 20. EVERYTHING ELECTRICAL.

The Sayer Electric Co'y, Montreal, Que. 10-14 Beaver Hall Hill

History of Lewis Bros. & Co. & Illustrated



646 CRAIG ST., 1887-1889.
Ground Floor and Basement.



453 ST. PAUL ST., 1889-1893.



ST. SULPICE ST., 26-28-30.
1893-1902 1902-Present
Part of Darling Bldg., No. 30 only. Entire Bldg.



BLEURY STREET-SEVEN STOREYS.

A HISTORY OF GROWTH.

ON the opposite page will be noticed a series of illustrations showing the development of Lewis Bros & Co., of Montreal, since they first started business.

The contrast between their new building, now in course of construction, and their first place of business is marked. The new warehouse is to be a seven-storey building of mill construction throughout, complying with all the requirements of the insurance underwriters. It has a frontage on Bleury street of 125 feet, the greatest depth being 211 feet, with an estimated floor space of three acres. The front is of stone and from the pavement to the top the height will be one hundred and four feet. A complete sprinkler system is to be installed on every floor. The company will have its own power plant, for lighting, heating, ventilating, running elevators, etc.

The basement will be used for a stock room as well as for the power plant mentioned. The other floors are to be allocated as follows: Ground floor, shipping department; 1st floor, order department and order assembling room; 2nd floor, buyers' offices and stock room; 3rd, 4th and 5th for stock; 6th, general offices and sales department. Between these four elevators will run—three freight elevators seven by twelve feet with a speed of 100 feet per minute and one passenger elevator with a speed of 250 feet per minute.

ASSOCIATION MEETS.

The Tarred Paper Manufacturers' Association held their annual meeting in the offices of Jenkins & Hardy, No. 151-2 Toronto street, Toronto, on Tuesday, December 20. Those who were present were Col. McArthur, representing A. McArthur & Co., Montreal; Messrs. Lockerby and McComb, representing the firm of the same name in Montreal; R. Curry, of the Dominion Paper Co., Montreal; A. Mullholland, of the Northumberland Paper Co., Campbellford; I. Butler, of the Hamilton Tar Distilling Co., Hamilton; J. W. Patterson, representing the Carritte, Patterson Mfg. Co., Halifax and St. John; and N. L. Paterson, of the Paterson Mfg. Co., Toronto and Montreal. The election of officers which took place resulted in J. W. Patterson being elected president, Col. McArthur, vice-president, and Jenkins & Hardy, secretary-treasurers. After the regular routine business was transacted, the present price list was brought up for discussion. The result was that the prices continue unchanged for another year.

GOSSIP OF THE TRADE.

Heard by "The Man on the Inside."

AN agency for Canada has been opened up by the American Window Glass Co., of Pittsburg, Pa. The office is located in Montreal and Mr. Gerald Lomer has been placed in charge. Mr. N. L. Roberts, representative of the firm, has given the new agency a good send-off by a series of calls on the trade in Montreal. I am told that this firm are in an excellent position to fill orders immediately—a good thing for the trade to know, as the strike of glass workers in Belgium is interfering with the supply considerably.

I am told on excellent authority that Mr. W. B. Stewart has resigned as agent in Toronto for the Consumers' Cordage Co., Limited, of Montreal, and will devote his time more fully to the interests of the Hamilton Cotton Co. Mr. W. A. C. Hamilton, of Montreal, a well-known figure in the trade, will succeed Mr. Stewart and will make his headquarters and continue to carry stock at 11 Front street east, Toronto, having arranged with Mr. Stewart for the use of part of his premises.

The Canada Machinery Co. Limited, which purchased the entire plant formerly operated by the G. A. Crosby Co., Limited, Point Edward, Ont., have also acquired possession of the Crosby Co.'s patterns, drawings, jigs and special tools. I am informed that the company will immediately proceed to manufacture a very complete line of power presses for blanking, reducing, embossing, punching or otherwise working sheet metal. They will also manufacture drop presses, hand, foot, and screw presses, dies of all descriptions, and in fact any machinery used in working sheet metal. Their sphere of activity will also include a full line of high grade engine lathes, planers, shapers, drills, gear cutters, grinders, and a variety of other machine shop equipment. Old patterns are being improved upon wherever possible, and new ones are being added. An important catalogue may shortly be looked for from this company.

The trade will learn with regret, as I have done, that Mr. Cottingham, the vice-president and general manager of

the Sherwin-Williams Co., has been laid low with typhoid fever. I am glad to say, however, that the case is a mild one and the patient is progressing favorably towards recovery.

Two or three weeks ago a visit was paid Toronto by Mr. Safford, of radiator fame, and at the time it occurred to me that something was in the wind. Only surmises were possible and these were embodied in a few paragraphs on page 31 of Hardware and Metal for December 3, 1904. A reference to this article will show that the surmises have to-day been verified in fact and a new radiator company has been incorporated. What are to be the extent and scope of its operations and where its factory will be located are details which have not yet passed the board of directors. Suffice it to note that Mr. Safford himself is a director, that the capital stock has been placed at half a million and that the company has been empowered to manufacture radiators, heaters, steam fixtures and fittings and other heating apparatus. In company with the rest of the trade, I am awaiting developments with considerable interest.

A prominent figure in Canadian hardware circles passed away last Saturday night at Peterborough in the person of Mr. R. B. McKee, president of the Peterborough Hardware Co. Mr. McKee was for many years head of the hardware firm of McKee & Davidson, the original company out of which the Peterborough Hardware Co. was formed. At the time of his death he was also a director of the Peterborough Lock Mfg. Co. He was a progressive business man and was held in high esteem both among his fellow-citizens in Peterborough and the trade in general.

I notice that the Canada Metal Co., of Toronto, have completed the renovation of their offices. They have certainly improved the appearance of their premises immensely and they possess now one of the most attractive suites of offices in the trade. Two new offices, one for the travelers and the other for the superintendent, Mr. W. G. Harris, have been added.

"THE MAN ON THE INSIDE."

ALUMINUM

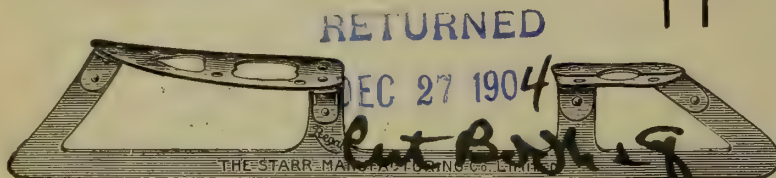
CASTINGS
SPINNING
STAMPING

MADE TO ORDER
BY

Canadian Aluminum Works, Limited, Montreal

Factory and Foundry: Chambly Canton, P.Q.

Office: 13 St. John St.



THE *Page 10*
"REGAL" HOCKEY

A leader for your very, very best trade. For quality of material and workmanship none can equal it. The unbreakable Box Bracket is one of its many features. A skate you can be proud to show, and one with which your customers will be highly satisfied—a profitable skate to handle.

**THE STARR
FIGURE SKATE**

EMBODIES ALL THE ESSENTIAL FEATURES OF A SKATE IN ITS CLASS. The Radius of the Blade enables the skater to execute the most difficult figures.



SPECIFICATION :

BLADES—Of best quality, welded iron and steel, ground exact to special radius, hardened by our own secret process.

TOPS—Of high carbon steel.

FINISH—Nickel on copper, beautifully buffed,

The Starr Manufacturing Co.,
MANUFACTURERS

LIMITED

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TELEPHONE 123 Main

THE STARR M'F'G CO., LIMITED
MAKERS

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Branch : 59 York St., Toronto

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HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN.

Montreal.

The MacLean Publishing Co. Limited

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New Advertisements:

American Window Glass Co., Montreal.
London Fence Machine Co., London, Ont.
Oshawa Wire Fence Co., Oshawa, Ont.

A HUDSON BAY RAILWAY.

IN a recent speech at a banquet to Dr. Roche, M.P., Premier Roblin, of Manitoba, outlined a scheme for the construction of a railway from Winnipeg to Hudson Bay. With the Territories about to be given provincial status, the Manitoba Government consider that, unless their province is to be completely overshadowed in area and population by the new province or provinces about to be formed, the boundaries of Manitoba should at the same time be extended northward to Hudson Bay. Whether the Dominion Government will comply with the wishes of the Manitoba Government in this respect remains to be seen, but it can scarcely be doubted that the extension of Manitoba's boundaries northward would mean much for the development of this vast hinterland as yet so little known.

It is true that, as the Manitoba Free Press has remarked, this Hudson Bay railway scheme has a familiar sound, but what was not practicable ten or fifteen years ago may be quite possible of accomplishment in these years of prosperity. The project seems likely to be pushed if Manitoba's boundaries are extended. Premier Roblin's plan, which as yet is probably merely tentative, is that the Province of Manitoba and the new province or provinces to be formed in the Territories should unite in building to a Hudson Bay port a Government railway.

We take it that before any such project is entered into a thorough investigation will be made of its possibilities. As yet we have no absolutely reliable information as to the length of time during which navigation is practicable in Hudson Bay. Account must also be taken of the dangers of navigation during certain seasons of the year in order that there may be some certainty that the cheapening of transportation by that route to Europe be not more than counterbalanced by increased insurance charges.

It must be admitted that the scheme has great attractions, offering as it does a much shorter route for the transportation of western wheat to Liverpool. Every mile saved on the overland route means a great cheapening in transportation charges and the idea of giving the Northwest an ocean port suggests possibilities which are worth striving after. Not only would the overland journey be shortened, but the total distance from the western wheat fields to Europe would be considerably reduced. A considerable carrying trade from the United States might be expected to result if the route should prove satisfactory. The west has a right to expect a thorough investigation of the possibilities of the route.

The following table of distances tells the whole story:

	Miles.
Winnipeg via Hudson Bay to Liverpool.....	3,626
Winnipeg via Montreal to Liverpool.....	4,228
Duluth via Hudson Bay to Liverpool.....	3,778
Duluth via New York to Liverpool.....	4,201
St. Paul via Hudson Bay to Liverpool.....	4,096
St. Paul via New York to Liverpool.....	4,240

A COMPLAINT FROM THE WOOL MEN.

A FEATURE of the Canadian market which is attracting considerable interest at the present time is the price of skeepskins in Canada, which, according to dealers, is out of all reason with the price of wool and pickled pelts. At the same time sales are very active, and American buyers pride themselves on the fact that they have practically a corner on the Canadian market.

The trade are interested in knowing how their fellow tradesmen across the line are able to outbid them in their own markets, and can only account for it on the supposition that by some means or other the import duty on skins is in part evaded by American buyers. The duty on combings going into the United States is 12c per lb., or 11c on the skin, while on fine, extra and super wool it is considerably higher. Canadian dealers are of the opinion that American buyers get around the higher duty by listing all their wool so as to come within the lower tariff. Skins cost the puller \$1.25 on the Canadian market; at this price he must get 26c for his super wool to clear himself. U. S. buyers, however, are paying from \$1.35 to \$1.40 for the same skins, and yet the biggest dealers in Boston will not buy this wool at 26½c. In other words, prices realized in the United States do not differ materially from those ruling in the domestic market, and conditions of labor being equal, there does not seem to be any reason why the cost to the American dealer should be less than 26c plus the duty (12c or upwards per lb.)

As a result the leading pullers in this country are at a standstill, or next thing to it, and supplies are hard to get on account of the inability of Canadian dealers to pay the same price as Americans. Dealers, pullers and manufacturers feel that they have a grievance, and that if the anomaly is due to the connivance of the customs authorities at the various ports of entry to the United States it is worth investigating on the part of the Dominion Government.

THE PROBLEM OF PURE WATER SOLVED.

CLEARNESS and sparkle are no more ultimate proof of purity in drinking water than a gilded glitter is evidence of pure gold. Water may be as clear as crystal and sparkling as brilliants, and yet be as laden with plague as the waters of the City of Jericho, when the city fathers besought the prophet to purify the supply. Fortunately for mankind, however, water that is unfit for human consumption generally possesses physical properties that appeal to the sense of taste or smell in a manner sufficient to make it undesirable. Human beings cannot live without a liberal supply, so that the purity of the water in any place is one of the most potent factors in the health of that community. The problem of obtaining a plentiful amount for domestic purposes has been before the nations through all time, and we find the Carthaginians at the time of Hannibal bringing the drinking water from reservoirs through closed viaducts in much the same manner as we do to-day. Waterworks engineering has advanced apace since those days, and the old gravity systems given way to pressure mains, but the old question still arises: Where can we get the best water at not too great a distance?

The matter is too serious a one to be lightly treated, as most municipalities know, and as others find out when an epidemic has swept the place. The deadly bacilli may be found in teeming millions, and their presence known only when many are taken with fever with fatal results. If it was suspected that the water was not as it should be people were told to boil it, but this precaution was more honored in the breach than otherwise.

If a recent report issued by the Bureau of Plant Industry in the U. S. be true, (and there is every reason to believe it such) the problem of pure water is forever solved. A method as effective as it is simple appears to have been discovered which as yet has had no general application, but from what has been accomplished thereby leaves little doubt as to what may be accomplished. The purifying agent is copper sulphate, and it is claimed that a quantity indistinguishable to the human organism will

effectively cleanse any reservoir or source of drinking water supply, leaving it pure and clean and wholesome. The disinfecting properties of copper sulphate are well known, and for many years a concentrated solution has been used for that purpose. Housecleaning time generally saw a generous treatment of it in damp cellars and foul places with almost magical results.

It remained for Dr. George T. Moore, of the United States Department of Agriculture, to find out beyond question that a quantity of copper so small as to have no injurious effect on man, would effectively kill all typhoid and cholera and other germs in drinking water. Like many another important discovery for the benefit of mankind, it was found out

PHOTOGRAPH YOUR HOLIDAY WINDOWS.

Before you take to pieces that holiday window display, on which you have lavished so much time and labor, have a photograph taken of it. Next Fall we will publish a series of these photographs. You will thus be able to exchange ideas with window dressers all over the country and have something new to work on for next year. Write us about it.

while experimenting with another object in view.

Appeals had been sent to the department from different municipalities for advice and assistance in connection with their drinking water. In many places where natural reservoirs were used a small vegetable organism called algae developed, that rendered the water foul and unfit for use in the Summertime particularly, so that animals, however thirsty, refused to touch it. It developed so rapidly, and formed a scum on the surface, that the only remedy seemed to be to empty the reservoir and sweep it, an undertaking by no means practicable. It was recognized that some definite steps must be taken to remedy the evil, and Dr. Moore was delegated to conduct experiments.

Specimens of algae were obtained from all parts of the country and work begun, the results of which are described in a bulletin issued by the Bureau of Plant Industry. His aim was to dis-

cover a substance that would poison the algae and yet not harm the water, and that would be cheap. Many substances such as chlorine, sulphur dioxide, silver, mercury and lead, were found effective but prohibitive on account of their cost or injurious effects on animal life. He found, however, in copper sulphate, popularly known as blue stone, a substance that answered his requirements exactly. Solutions as weak as one part in 50,000,000 were found to be effective, and at the same time this small amount of copper was practically indistinguishable. Practical tests were then made on infected reservoirs with really amazing results. By dissolving a small quantity of sulphate suspended in a canvas sack from a row boat, the copper was well distributed. It was found that within 24 hours all the algae has disappeared and the water left clear and sweet. This, however, was only one of the troubles overcome in connection with drinking water, and one that was felt only in certain districts. A greater evil attends the drinking of water in the form of the deadly typhoid and cholera germ. Without experimenting with that in view it was found that the same substance that had wrought such a change on the algae was equally disastrous to germ life. Tests of the water treated showed that all germ life had been destroyed. Thus in dealing with one problem a greater and more serious one was solved.

Municipalities, corporations and waterworks companies should not be slow to act in adopting this effective and very cheap method in any case where the water is even suspected. Where there is an epidemic of fever from the drinking water it should appeal to the community as one of the greatest blessings to mankind. It seems strange that such a simple remedy had not been discovered sooner, but now that the fact is known and given to the world at large there seems no excuse that preventive measures should not be taken by its application.

WINNIPEG BANK CLEARINGS.

PERHAPS there is no more reliable indication of the business prosperity of any city than is afforded by the amount of its bank clearings. Al-

though the proportion which these figures bear to the total amount of business transacted is not fixed yet they give some indication of the volume of trade as nearly all transactions involving more than small amounts of money are effected through the banks and some proportion of them is reflected in the bank clearings. Special causes operate now and then to effect great fluctuations in the gross amount of bank clearings in any city, but when, from week to week, and from year to year, a steady increase is shown it may safely be taken as a reliable index of the growth of a city's business.

Statistics are not required to prove the prosperity of Winnipeg. It is to be seen in the magnificent warehouses and imposing business blocks which have recently been erected. Every citizen and every visitor is impressed with the fact that the business interests of the western metropolis are rapidly expanding and that her business men are making money. But additional, albeit unnecessary, proof is afforded by the steady increase in bank clearings. The figures for any week would serve to illustrate a steady and healthy growth as compared with former years and those quoted below are nothing out of the ordinary. The same story has been told week after week for a long time, and it is a story of a healthy growth, for there is no evidence of a "boom" which may be expected to collapse to the confusion of investors. An old but pleasing story is told by these figures:

Winnipeg Bank Clearings—

Week ending Dec. 15, 1904. . \$7,980,150

Corresponding week, 1903 . . 6,024,337

Corresponding week, 1902 . . . 5,102,593

THE WINDOW GLASS SITUATION.

THE window glass situation in Europe shows scarcely any improvement at the present time. There are in operation about seven factories, but their total output is only a fraction of the European ordinary production, and the product of these factories is readily disposed of at a high price. At present there are no signs of a general resumption of work although it is understood that in several localities the workmen appear to be weakening somewhat.

The manufacturers are very firm in their position and decline to make any attempt to commence glass making until the first of February and if the workmen are not more conciliatory at that time, the lockout will continue. It is hoped by the manufacturers, however, that by that time a hard Winter will

be sufficient inducement to force the men to work at the terms of the syndicate agreement.

As a result of the above condition of affairs, the glass market in Canada remains very firm. Stocks in the hands of jobbers are very much depleted, and with the prospect of an open Winter, large quantities of glass will be required before Spring. Up to the present time small shipments have been received but not in sufficient quantities to make any general impression. Further orders of limited quantities have been booked for February and March deliveries, but the high price at which they have been purchased precludes any possibility of glass being cheaper before the opening of navigation. The most serious feature however, from the retailers' point of view is that import orders which are usually taken at this time of the year for Spring delivery, cannot now be booked. These orders aggregate many millions of feet and their non-arrival will mean a scarcity of glass and a high price throughout most of the Summer of 1905.

Business Men in Parliament

WINNIPEG'S new representative at Ottawa, Mr. D. W. Bole, is one of the prominent commercial figures of the western metropolis, being the president and managing director of the Bole Drug Co., wholesale druggists, with large warehouses in Regina and Calgary.

Mr. Bole is a native of Lambton County, Ontario, where he was born in 1856. He received his education at the common schools of Woodstock, and later studied at Woodstock College. He then proceeded to take the pharmacy course at Toronto, graduating in 1880.

In 1882 Mr. Bole, like many another young man, started out to the Northwest and established himself at Regina, where he launched out as a small drug jobber. His business grew until in 1889 he decided to move to Winnipeg, where he organized the firm of Bole, Wynne Co., which in 1893 amalgamated with the firm of E. D. Martin & Co.

The Bole Drug Co., as it now exists, was organized in 1898 with a capital of \$300,000, of which \$225,000 has been paid up. The company have a splendid warehouse at Nos. 66, 68 and 70 Princess street, Winnipeg, admirably equipped to meet the growing requirements of the Canadian west.

Mr. Bole's apprenticeship to the art

of government was served on the Winnipeg City Council and the Winnipeg Board of Education. He was for two years a valued alderman of the city, and his period of service on the Board of Education extended over eight years, during three years of which time he acted as chairman. The Board of Trade has also been the scene of much of Mr. Bole's activity, and in 1898 he occupied the president's chair.

As president of the Wholesale Druggists' Association of Canada, Mr. Bole takes rank as the leader of the wholesale drug interests of the Dominion. He has always been enthusiastic in his work for this association, and his elevation to the presidency comes as a just reward for years of hard work on its behalf.

Mr. Bole's interests are by no means



D. W. Bole, M.P.

centred on business and politics. He has devoted himself also to benevolent works, and he has always been a champion of the cause of education. He is at present a distinguished member of the Board of Management and Senate of Manitoba College.

COILED WIRE PRICES CONFIRMED.

Since the market quotations have gone to press it has been given out that the prices on coiled spring wire have been confirmed for next season. The prices are, however, subject to change without notice.

OFF FOR A TRIP.

Mr. N. A. Wylie, traveler for Lewis Bros. & Co., Montreal, is taking a trip to New Orleans, stopping off at St. Louis on the way.

MARKETS AND MARKET NOTES

(For detailed prices see Current Market Quotations, page 62.)

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, Dec. 23, 1904.

Hardware.

LITTLE change has taken place within the week in conditions attendant upon the hardware market. Travelers are busy preparing to get on the road the first of the year and are making preparations for a large amount of business. Conventions and dinners are a feature in wholesale circles this week. Holiday business is brisk and a satisfactory condition of affairs prevails. Prices remain unchanged.

Hockey Sticks and Pucks—The market is very active. Quotations are: Boys' hockey sticks, from \$1.50 a dozen up; men's, \$2.25 to \$3.50 a dozen; regulation pucks, \$2 a dozen; juvenile, \$1.15 a dozen.

Plated Ware and Cutlery—There is still a large holiday trade being done in these lines. Quotations are as follows: Rogers 1847 goods 45 per cent. off list; case carvers from \$2 to \$10 per set; scissors in cases 90c to \$2.

Skates—The popularity of skating seems to be undiminished, leaving little to be desired as far as volume of trade in those lines is concerned. Quotations are as follows: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concealed, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concealed, \$1.60 a pair.

Axes—Axes are still in good demand. We quote: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—Sales reported this week are fairly numerous, although somewhat less brisk than before. We quote: Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3, \$1.50 a dozen.

Carpet Sweepers—There has been no falling off in the demand and trade in these this year has been highly satisfactory. Quotations \$21 to \$31 a dozen.

Food Choppers—The market is quieter and very few are being ordered. We quote: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Sewing Machines—Considerable activity still prevails. We quote: Hand sewing machines, \$11 each net; complete

machines with stand, \$18 and up, according to quality.

Lanterns—The lantern market is much brisker than is usual at this time of the year. Quotations are: Cold Blast, \$6; No. 0 Safety, \$4 a dozen.

Sleigh Bells—Fairly good sleighing in the St. Lawrence valley has created a good demand for sleigh bells in that district and the market in Quebec has been active for some time. Quotations are: Brass team bells, rough, \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5 a dozen; nickeled, \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—A further fall of snow has had a beneficial effect on the demand for shovels. We quote: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount; Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Barb Wire—The market is quiet. We quote as follows: \$2.75 per 100 lbs f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Fence Staples—Last week's change in price still holds. We quote: \$2.65 per hundred lb keg for bright, and \$2.85 for galvanized; 25 to 50 lb packages 25c extra.

Rivets and Burrs—In rivets and burrs there is an upward tendency, but as yet no change in prices. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—A fair demand prevails, but the market is hardly as active as before. Discounts: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—No change from last week. Merely a nominal trade being done.

Wire Nails—Shipments of these at present are not large. We quote \$2.20 per keg, f.o.b. Montreal.

Cut Nails—The demand is light. We quote \$2.20 per keg f.o.b. Montreal.

Horseshoes—In common with other heavy goods the demand has lessened materially within the last few weeks, but is still fairly good. We quote as follows: "P. B." new pattern, base price \$3.50 per 100 lbs.; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—At this season of the year there is generally a good demand and such conditions prevail at present.

Sporting Goods—The holiday trade in sporting goods continues, but cannot compare with the activity of a few weeks ago. Our quotations are as follows: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand. Standard shot, \$6.50 per hundred lbs; chilled, \$7 per 100 lbs; buck and seal, \$7.50 per 100 lbs; ball, \$8 per 100 lbs. We quote discounts 15 per cent, f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—Manufacturers report little activity, and do not expect any large volume of business until Spring.

Cordage—The cordage business is in a satisfactory condition in spite of the keen competition existing. Raw material has advanced, but as yet no changes have been made in prices.

Cement and Firebrick—Since the first fall of snow few shipments of these lines have taken place. Quotations are as follows: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—Trade is quiet. Our quotations are as follows: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3; one inch, \$2.95.

METALS.

The metal market is no more lively but slightly weaker than before. Pig iron is active and large orders are being placed for future delivery. Copper is weaker and a reduction of one-quarter cent a pound is noted. The demand for sheets has lessened somewhat and little activity prevails in zinc and lead. Other than a reduction in copper there is no change in prices.

Pig Iron—Dealers report trade conditions in pig iron very satisfactory this week and large orders are being placed, making the outlook very bright. Prices continue firm but without change. We quote:

"Disc," No. 1.....\$16.50 delivered Montreal.
 "Dom.," No. 1..... 17.50
 Usual difference in price for lower grades.

Ferrona No. 1.....\$18.00 delivered Montreal.
 " No. 2..... 17.50 " "
 " No. 3..... 16.50 " "
 " No. 4..... 16.00 " "

Londonderry.....\$18.50 to \$19.00 delivered Montreal.
Glengarnock..... 20.00 " "
Gartsherrie..... 19.25 " "
Carnbroe..... 18.50 " "
Carron No. 1..... 19.50 delivered Montreal.
 " (special)..... 18.50 " "
Ayresome No. 1..... 18.00 " "
 " No. 3..... 17.50 " "
Summerlee..... 19.50 " "
Clarence No. 1..... 18.00 " "
 " No. 3..... 17.50 " "
No. 1 Cleveland..... 18.00 " "

Bar Iron—Demand has kept up well. We quote: Merchants' bar, \$1.77 1-2; horseshoe iron, \$2.02 1-2; forged iron, \$1.97 1-2, net cash thirty days.

Tool Steel—A steady demand prevails and a good deal of stock is moving. Our quotations are as follows: Black Diamond, 8c to 9c; Sander-son's, 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb; Conqueror, 7 1-2c; Conqueror High Speed steel, 60c.

Merchant Steel—While not brisk there is some little activity in merchant steel this week. The market is firm. We quote: Sleighshoe, \$1.82 1-2; tire, \$1.92 1-2; spring, \$2.75; toecalk, \$2.42 1-2; machinery (iron finish), \$2.02 1-2; square harrow, \$1.92 1-2; reeled machinery steel, \$2.75; mild, \$1.82 1-2; rivet, \$1.82 1-2; net cash thirty days.

Cold Rolled Shafting—Manufacturing establishments continue to call for considerable. Prices firm, but on change. We quote: Cold rolled shafting, 3-4 in. to 17-16, \$3.85 per 100 lbs; inch and a half to 3 inch, \$3.50 per 100 lbs.

Canada Plates—There is a marked firmness in these at present with but little stock moving. We quote as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—Black sheets are fairly well stocked throughout the country, so that there is not much new business. Quotations are as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—As mentioned before this season's business in galvanized iron is fairly well over, but judging from the amount of orders placed the volume of trade for next season will be large. We quote: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge, \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28

gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Antimony—Little stock is moving and the market is firm. We quote 9 1-4c to 9 1-2c.

Sheet Zinc—Sheet zinc has seen little demand recently, and although the market is weaker there has been no change in price. We quote: Case lots, \$6.75 to \$7; small quantities, \$7 upward.

Tin Plates—There was a slight easing off in tin during the week, but the market has recovered and no change is noted. We quote as before: Cokes, \$3.75 and charcoal \$4.

Ingot Tin—There has been no further change from last week's reduction of 1-2c a pound. We quote: 32 to 32 1-2c, with no shading whatever.

Ingot Copper—Copper is weaker and a reduction of one-quarter of a cent a pound on last week's quotations is reported. We quote: 15 3-4 to 16c, the former price being for quantities only.

Ingot Zinc—The season for zinc is over and little stock is moving. The market continues weak. Quotations are 6 1-2c to 6 3-4c.

Pig Lead—The lead market which has been firm for some time past has eased off considerably, but no change of price is reported. We quote: \$3.50 to \$3.60 no concessions being obtainable on the former price.

Boiler Tubes—There is a fair activity in this line, with a firm market. We quote: Highest grade soft steel British and American tubes, one and a half inch, 7 1-2c; 2 in., 8 1-2c; 2 1-2 in., 10c; 3 in., 12 1-4c; 3 1-2 in., 16c; 4 in., 20c; 5 in., 45c. Price per foot net.

Scrap Metal and Old Material—The scrap metal market has not changed from that of a week ago. There is more activity and conditions are more satisfactory than they were some weeks since. There is no change in prices. We quote: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 2 1-4c; zinc, 23-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 5 1-2 to 6c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
 10 Front Street East,
 Toronto Dec. 23, 1904.

Hardware.

UP to within the last two or three days business in general hardware lines has been exceptionally bright for this time of the year. Now, however, the holiday season is asserting itself, and trade has fallen off. This condition of affairs will probably hold until after the new year, when things will begin to pick up again. There seem to be exceptionally bright prospects for next year's trade. This is to be specially noted in bolts, nuts, screws, etc. The price of bar iron has been steadily advancing during the last few months on

the American market, and it is fully expected that there will be an advance in bolts, nuts, screws, etc., before long. On this account and also because of the large consumption a very brisk demand is expected for these lines.

Next year's prices for binder twine have been issued two or three months earlier than usual and are on a much lower basis than last year. Orders have been coming in very freely for some time, prices being guaranteed, but probably the issuing of the price lists will give an extra impetus to trade.

Lawn Mowers—There are a few orders being booked.

Guns and Ammunition—Trade has become normal, Fall trade being over.

Washing Machines—Nothing special is to be reported; the general trade continues.

Chain—The normal trade keeps up. We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Barb Wire—Prices remain firm at recent changes.

Galvanized Wire—The trade is normal with unchanged prices.

Coiled Spring Wire—Nothing special is to be reported. Quotations remain unchanged, and the usual business of this time of the year is being done.

Wire Nails—A good demand continues and the situation is unchanged, and an average quotation appears to be about \$2.25 f.o.b. Toronto, with earlots at at \$2.20.

Cut Nails—Prices remain firm at last week's advance. Quotations are \$2.30 to \$2.40 per keg f.o.b. Toronto.

Horseshoes—A very good demand for horseshoes is reported for this time of the year. We quote as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—There is a good demand with unaltered prices.

Screws—A good business is being done, with prices firm.

Rivets and Burrs—The volume of trade is good. Prices remain unchanged.

Bolts and Nuts—There is a good trade with firm prices.

Woodenware—Market conditions remain unchanged, and the normal business continues.

Cordage—The prices on binder twine for next season have been issued, several months before the usual time and on a lower basis than last year's. Orders have been coming in freely for some time, the prices now issued being guaranteed, and it is probable that impetus will be given to the market by the giving

out of the prices. Quotations are as follows: Binder twine, Blue Ribbon, 12 1-2c; Red Cap, 11 1-2c; Tiger, 10 1-2c; and Standard, 9 1-2c; double shingle yarn 10 1-2c; single shingle yarn, 10c; sashcord "Hercules," 30 to 32c; "Star," 36 to 38c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 63-4c; white, 11 to 13c.

METALS.

The market continues strong and very active. Orders are still booked up for delivery during the first six months of the year, and there is now a tendency for the placing of orders for delivery during the latter part of the year. There have been further advances on the market this week. The price of tin plates has advanced, quotations now being for coke plates, bright, I.C., usual size, 14x20, \$3.40 instead of \$3.35; I.C., special sizes, base, \$3.70 instead of \$3.60; and 20x28, \$7.50 instead of \$7.10. There has also been an advance in zinc spelter. Foreign has advanced 1-4c per pound; domestic remains unchanged. There is a much better demand for copper now. Tin continues firm. All-bright Canada plates are very scarce.

Pig Iron—Orders are being placed for pig iron for delivery up to late in the coming year. Midland cannot be had for delivery before June. Competition from English iron can be the only thing that is keeping the price of Canadian iron so low in comparison with iron from the States. Quotations are as follows:

Middlesboro, f.o.b., Toronto.....	\$18 90
Hamilton, No. 1	18 00
" No. 2	17 50
" No. 1, Hamilton	17 00 to 17 50
Midland, No. 1	18 00
" No. 2	17 00 to 17 50
No. 1 f.o.b. Midland	16 25 to 16 75
Radnor, f.o.b. furnaces	27 50
Londonderry, f.o.b. furnaces	16 50 to 17 00

Bar Iron—There is a firm and active market. Quotations remain unchanged. We quote as follows: \$1.80 f.o.b. Toronto, with discount of 2 per cent.; for extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tin—There is a very strong market, with an advance in prospect. Quotations remain at from 32 to 34c per pound.

Galvanized Sheets—There is a very good demand. Prices are firm.

Tin Plates—There has been an advance in bright coke plates as follows: I.C., usual size, 14x20, \$3.40 instead of \$3.35; I.C., special size, base \$3.70 instead of \$3.60; 20x28, \$7.50 instead of \$7.10. There is a good trade being done.

Canada Plates—All-bright are very scarce, and the advance of last week holds firm. We quote: Half-polished, \$2.50; and all-bright, \$4.

Brass—There is an active market, with advance of last week holding firm. Discounts are 10 per cent.

Lead—The market continues firm, and sales are good. Quotations are: Pig lead, \$3.60 per 100 lbs; and bar lead \$3.60 per 100 lbs.

Zinc Spelter—There has been an advance in foreign spelter 1-4c per pound.

A very good trade is being done. Quotations are 6 1-4 to 6 1-2c per pound for foreign; and 5 1-2 to 5 3-4c per pound for domestic.

Copper—There is a much better demand. Quotations remain unaltered as follows: Ingot copper, 15 1-2c per pound; sheet copper, 20c per pound.

Antimony—An advance of 1c per lb. is to be noted in antimony. Quotations now are from 10 1-0 to 11c per pound.

Cement—During a recent meeting held in New York rock cement was advanced one dollar per barrel. This action is the keynote of the conditions prevalent on the American cement market. If all the prices of American cement advance it will have a strong tendency to strengthen a similar feeling that has already been created among the Canadian manufacturers. The majority of manufacturers and jobbers anticipate an advance in the near future and refuse to book large orders for future shipment. We quote: For carlot orders f.o.b. Toronto, Canadian Portland, \$1.70; American Portland, \$1.70. For small orders ex warehouse: Canadian Portland, \$1.90 to \$2; American Portland, \$1.90 to \$2.

Building Paper—Trade is quiet. The outlook is for a continuation of present conditions until the opening up of the building trade next Spring. Prices continue unchanged.

Firebrick—There is a stronger inquiry for firebrick this week, and the anticipation is that there will be a large amount of repair work accomplished during the quiet season succeeding the holidays. Scotch firebrick has the principal demand. Prices continue unchanged. We quote as follows: English and Scotch firebrick 30 to 35c; American, low grade, 25 to 30c; high grade 32 1-2 to 40c.

Old Material—The movement in wrought iron is quiet and the supposition is that the manufacturers stocked their plants when the prices were at the lowest figure during the past Summer. Ingot copper has declined, due to speculation. This change in conditions has made no change in scrap copper on the local market, in fact, light copper, which is scarce, has advanced 1-4c per pound. The price of prime spelter zinc in New York and London has declined, but no material change is noted on the local market. The market for old rubbers has again changed and the demand which was so strong last week is an absent feature on the market of this week. With the exception of light copper, prices continue unchanged. We quote as follows: Heavy copper and wire, 12c per lb; light copper, 11 1-4c per lb; heavy red brass, 10c per lb; heavy yellow brass, 8c per lb; light brass, 5 1-2 to 6c per lb; tea lead, \$2.35 per 100 lbs; heavy lead, \$2.50 to \$2.60 per 100 lbs; scrap zinc, 33-4c to 4c per lb; iron, No. 1 wrought, \$9; No. 2 wrought, \$2; machinery cast scrap, \$12.50 to \$13; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 5 1-2c per lb; country mixed rags, 65c per 100 lbs.

Coal—Trade continues unchanged. Scarcity of cars causes a great delay in shipments. Slack continues to be scarce.

Prices are unchanged. Our quotations are as follows: Anthracite in cars at Briges; Grate, \$5.50 per gross ton; egg, stove and nut, \$5.75 per gross ton; pea, \$3.75 per gross ton.

Standard Hoeking, soft coal, in cars, f.o.b. at mines: Lump, \$1.60; 3-4 inch, \$1.50; run of mine, \$1.40; nut, \$1; N. P. and S., 75c; coarse slack, 50c; box cars 10 cents per ton additional.

Longhiogheny soft coal in cars, bonded, at the bridges: 1 1-4 inch, \$2.60; 3-4 inch, \$2.50; mine run, \$2.40; slack, \$1.90.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B.C., Dec. 16, 1904.

THE manufacture of Portland cement in British Columbia will minister directly to the building trade and to municipal improvement. Mr. R. P. Butchart, manager of the works which are being started at Tod, B.C., a few miles from Victoria, on Vancouver Island, is in the city to-day, and stated that the plant would be in operation in about two months. Those interested are Toronto and Owen Sound people, Messrs. E. R. Wood, J. W. Campbell and E. Bravender being of the former city, and Messrs. J. E. Murphy, D. M. Butchart, A. S. Butchart and R. P. Butchart, of the latter. Mr. Bravender was general manager of the Portland cement works, at Hudson, N.Y., and two others of the seven have had practical experience as managers. They have all tested the material and find that the product will be equal to the best cement brought from the Old Country. The mill will have a capacity of 1,000 barrels a day, but owing to the present limited market machinery for 300 barrels per day only will be installed. The investment will be \$350,000. Up to the present all Portland cement has been brought from England, but the demand in British Columbia is very rapidly increasing, and the local market is bound to enlarge. The City of Vancouver alone used about 7,000 barrels last year in cement sidewalks, and in 1905 will take about twice that quantity. One of the objects of Mr. Butchart's trip to Vancouver to-day was to interview the Board of Works in reference to the supply for the city. His product will be given a trial, and if satisfactory he will receive a share of the business.

Another matter of considerable interest is that the exhaustive tests conducted by Messrs. Pellew-Harvey, Bryant & Gilman, of this city, show that the fire clay found on the farm of J. Maclure, a few miles from Vancouver, is a splendid specimen. In fact the firm which made the experiments contend, from present indications, that the quality will prove equal, if not better, to any found on the continent or imported from the Old Country. They have had experience in London, and being practical men with many years' experience are familiar with fire clay. An order for machinery has been placed, pending the result of these experiments, and this will now be hurried forward and the factory constructed.

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FIRE BRICKS, FIRE CLAY,
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Metals of every description, Wire Rope, Portland Cements, Firebricks, Ore Sacks, Grain Bags, etc., etc.

Notwithstanding the cold water thrown on the proposed trade with Mexico at the recent Board of Trade meeting, there is a good prospect of a large business being built up between this country and that to the south. At the meeting of the Liberal Association this criticism was harshly condemned, and some points were quoted by men who had had experience in Mexico to show that trade could be secured. Canaries here have large quantities of old tin, which is used by the mining companies at Santa Rosalie for flux. British Columbia is in need of hardwood, which is very plentiful in Mexico, and sells here at six to eleven cents per pound. The recent successful shipment of coal to Mexico by the Dominion Coal Co., of Sydney, has encouraged the holders of the vast deposits in the interior, and it is expected that as soon as the direct railway line, which is proposed, will have been finished, fine coking coal will go down.

...

Mr. Wilson Foster, of Dawson, who was in Vancouver a few months ago on his way to St. Louis to exhibit the gold mineral specimens of the Yukon, announces the formation of the Alaska-Yukon Gold Co., which will operate under the laws of the District of Columbia. It will have a capital of \$5,000,000, and will be hydraulic. A quartz mining plant will also be installed. He is also promoting two other companies.

A quarter of a million dollars will likely be expended by the Consolidated Cariboo Hydraulic Mining Co. to get more water for its washing operations. Mr. J. B. Hobson, the manager, is down from Cariboo this week, and will leave shortly to attend the annual meeting in Toronto. He states that the operations lasted only 88 days, and it has been noticed that the time is directly governed by the supply of water. Forty square miles are now controlled, and the company has 65 more in prospect. By the expenditure of the amount stated, sufficient watershed will be controlled to secure enough water to last the entire season of seven months. As the ground has already been proved, the returns will be ample to justify the increased expenditure. Running less than half that time the operations produce enough gold to about defray expenses.

The coal output at the collieries of the Crow's Nest Pass Coal Co. for the month of November was 74,569 tons, the largest on record.

The Rossland Board of Trade is to petition the Dominion Government for a bonus on copper, similar to that given to lead and iron, and which has proven such a stimulus to the latter industries.

...

The Waterous Co., through its agent here, will install the machinery in four saw mills, one at Peachland, another at White Horse, at Kamloops, and another in the interior.

Revenue from timber sources, judged by the returns to the present, will be nearly \$365,000 for the fiscal year ending next June 30. Last year they were \$250,000, the highest on record.

Mr. T. G. Mitchell, chief engineer of the C. P. R. steamer Princess Victoria, will succeed Mr. James Fowler as Lloyd's surveyor at this port. Mr. Fowler has been appointed to Washing-

Tinned Sheets Tinplates Canada Plates Polished Sheets

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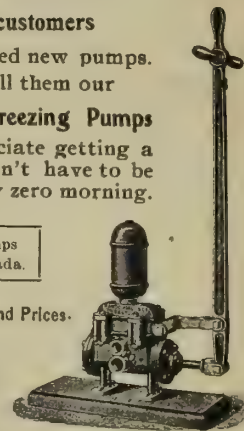
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NOVA SCOTIA STEEL & COAL Co., Limited NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

ton State, and will reside in one of the cities on the Sound.

The manifests of steamers leaving this coast for the Orient show that trade is good in all lines, and especially so in machinery, cotton, and flour.

Arthur Congdon, Winnipeg, boot and shoe dealer, and D. L. McGibbon, of Montreal, general manager of the Canadian Rubber Co., are opening branches of their wholesale establishments in Calgary.

No advance has followed locally because of the raise in glass in eastern markets. Staples are unchanged.

McGregor, Gourlay & Co., of Galt, Ont., have shipped some large machinery to this province. There is a planer for the Sayward Mills at Victoria, pieces for the B. C. Electric Railway shops at New Westminster, a planer for the Rat Portage Co.'s mills at Vancouver, some for the Hastings Mills, and other pieces. The machinery is now being unloaded.

PITTSBURG METAL MARKETS.

From the Iron Trade Review, Dec. 24, 1904.

ADVANCES in shapes, plates and steel bars were made at association meetings held this week, but the reaffirmation of the billet schedule was unexpected. The billet and beam meetings were held on Monday and the plate and steel bar associations met Tuesday. The billet manufacturers decided to reaffirm the prevailing schedule, despite the fact that steel for shipment within the next two months commands premiums from \$1 to \$3 a ton. It is doubtful now if any change in the present price will be made throughout the present upward movement, the market being in position to sustain itself. Furthermore, the association can be sustained to better advantage with billets on this lower basis than if the regular spread between steel and pig iron were to be maintained in the official quotations.

Pig Iron—Advances have been made in all grades of iron and owing to the poor shipment of coke and to water shortage further advances are looked for. We revise quotations as follows:

Bessemer, Valley	\$16 00 to	\$16 25
Bessemer, Pittsburg	16 85 to	17 10
No. 1 Foundry	18 00 to	18 25
No. 2 Foundry	17 35 to	17 85
Gray forge, Pittsburg	16 60 to	16 85
Chilled basic, Valley	15 75 to	16 00
Chilled basic, Pittsburg	16 60 to	16 85

Steel—At the meeting of the billet association held Monday prevailing prices were reaffirmed. This action was entirely unexpected, as an advance of \$2 was looked for. Premiums from \$1 to \$3 are being paid on billets for early shipment while sheet and tin bars are selling at a premium of \$2. Agreed quotations on steel are as follows: Bessemer and open-hearth billets, 4x4 in., and slabs, up to and including 0.25 carbon, \$21, f.o.b. mill, Pittsburg, with actual freight to points of delivery: 0.26 and including 0.60 carbon, \$1 advance: 0.61 to 1.00 carbon \$2 advance. Billets smaller than 4x4 in., \$2 advance; sheet and tin bars, \$23; cut bars, \$23.50; forging billets, \$23. Bessemer and open-hearth steel rods are held at \$30.50 to \$31.

GLOBE BRAND FILES AND RASPS

(WARRANTED)

Possess All the Merits of the Best Hand-Cut Files.

WHAT CONSTITUTES A PERFECT FILE ?

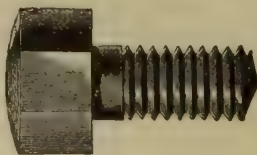
High-Grade Crucible Steel
Uniform Annealing

Perfect Forging
Sufficient Grinding
Increment Cutting

Accurate Hardening
Careful Testing

Manufactured by

NICHOLSON FILE CO., Dominion Works, Port Hope, Ont.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs
Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.



Joker



Blizzard

TRAPS FOR RATS AND MICE

Swift as lightning, sure as death and sure death to the animal. Strong, simple, substantial construction. "To get the best trap trade, sell the best traps made."

Write for prices to

J. M. Mast Mfg. Co., Lititz, Penna.

Canadian Ag'ts, C. H. Grenfell & Co., London, Ont.



Snap Shot



Old Nick



Write for Catalogue and Prices.

ICE HARVESTING TOOLS

For Butchers, Dairymen, Farmers, Ice Dealers, etc.

Ice Plows, Saws, Tongs.

Bars, Hooks, Axes, etc.

Robert Donaldson & Sons

30 YOUNG SQUARE, MONTREAL, QUE.

FOR BRITAIN'S MARKETS

hear from Manufacturers of General Hardware, Woodenware, etc., who seek direct "Representation" in its fullest interpretation. Have had 20 years experience amongst the Best British Buyers, and have a business connection which is unequalled. I know exactly their requirements and can satisfy any firm as to my Standing, Abilities, Business Methods and selling organization.

Will be in Canada during January and February next. In the meantime shall be glad to answer enquiries and make appointments in advance. Address in first instance:

WALTER P. NOTCUTT, c/o "Hardware and Metal," Toronto or Montreal.

I have unequalled facilities for selling Canadian manufactured goods in Great Britain and Ireland, and would like to

Plates—At the meeting of the plate association held yesterday a slight change was made in the schedule, only widths from 61-4 in. up to 14 in. inclusive being now \$2 below other sizes instead of widths up to 24 in. The advance amounts to \$2 a ton.

Structural Material—At a meeting of the beam association held yesterday an advance of \$2 was made. The outlook for shapes is unusually bright and a big year is looked for. We revise quotations as follows: Beams and channels up to 15 in., 1.50c; over 15 in. 1.60c; angles, 3x2 up to 6x6, 1.50c; tees, 1.40c; tees, 1.55c; angles from 3 to 16 in., 1.50c; universal and sheared plates, 61-4 to



"The Tool Holder People"

**Armstrong Bros.
Tool Company**

Manufacturers of Armstrong Patent Lathe and Planer Tools and other machine shop specialties.

617-621 Austin Ave., CHICAGO, ILL.

ASSISTANT EDITOR WANTED.

SOME one well acquainted with the hardware and metal business wanted as assistant editor **HARDWARE AND METAL** and **CANADIAN MACHINIST** at Montreal. State fully experience and salary wanted. Address Managing Editor **HARDWARE AND METAL**, Montreal.

14 in., inclusive, £.40c; over 14 in., 1.50c base.

Bars—At the meeting of the steel bar association Tuesday Bessemer bars were advanced \$2 and open-hearth \$1 a ton. Bar iron has also been advanced \$1 a ton and is now held at 1.643-4c Pittsburgh. Specifications for bars are heavy and the consumption is greatly on the increase.

Sheets—Demand for sheets continues heavy and prevailing prices are being maintained. For forward delivery premiums from \$1 to \$2 a ton are being secured.

Wire and Wire Nails—The cut nail manufacturers have advanced prices 10 cents a keg. Demand for wire nails continues heavy, while all grades of fencing are in good demand. We revise quotations as follows: Wire nails, jobbers' carload lots, \$1.75; retailers' carloads, \$1.80; and less than carloads, \$1.90; painted barb wire, \$1.90 to jobbers in carloads; retailers' carloads \$1.95, and less than carloads, \$2.05, with 30 cents for galvanizing. Annealed smooth fence wire is held at \$1.60, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburgh, 60 days, with 2 per cent. discount for cash in ten days. Iron and steel cut nails are held at \$1.80 Pittsburgh.

Merchant Steel—A meeting of the shafting association was held in New York last Thursday and prevailing prices were reaffirmed. At a meeting of the Cold Rolled Steel Association held here last Friday prices were reaffirmed, but the West Leechburg Steel Co., one of the leading factors, announced its withdrawal the first of the year.

Old Material—Demand for heavy melting stock and low phosphorus material continues to increase daily and prices continue to advance. Heavy melting stock, owing to the heavy demands on the part of open-hearth plants, is held at \$17 Pittsburgh, while low phosphorus scrap is quoted at \$20 to \$20.50. Rolling rails have advanced to \$17 to \$18 while cast scrap is held at \$15.50. Even at these prices the dealers that have large stocks are not anxious to sell and still higher prices are looked for.

LONDON METAL MARKETS.

From Metal Market Report, Dec. 21, 1904.

Tin—Spot tin opened firm at £132 5s, futures at £130 10s, and after sales of 120 tons of spot and 80 tons of futures closed quiet at £132 5s for spot and £130 10s for futures, making price as compared with yesterday 15s higher on spot and 20s higher on futures.

Copper—Spot copper opened easy at £65 15s, futures at £66 2s 6d, and after sales of 300 tons of spot and 150 tons of futures closed quiet at £66 for spot and £66 7s 6d for futures, making price as compared with yesterday unchanged on spot and unchanged on futures.

Spelter—The market closed at £24 12s 6d, making price as compared with yesterday 2s 6d lower.

Lead—The market closed at £12 10s, making price as compared with yesterday 2s 6d lower.

PERSONAL AND TRADE NOTES.

Mr. J. H. Plummer, president of the Dominion Steel Co., was a guest at the King Edward Hotel, Toronto, last week.

Mr. J. S. Irvine, managing director International Portland Cement Co., Ottawa, is just recovering from a severe attack of tonsillitis.

Sir Lowthian Bell, president of the Iron and Steel Institute of England, is dead. Deceased was born in 1816. He was an eminent scientific expert.

Mr. Arthur Gould, manager of the Dorchester Station branch of the Purdom-Gillespie Hardware Co., was married to Miss Winnifred G. Isaac, of London, on December 14.

It is reported that Mr. J. H. Ashdown, wholesale hardware merchant of Winnipeg, will be offered the appointment on the Transportation Commission made vacant by the death of Mr. John Bertram.

Mr. L. M. Brown has severed his connection as traveling salesman for the Canada Hardware Co., of Montreal, and has entered the employ of Seybold, Sons & Co. of the same city in a similar capacity.

Mr. Hugh McClelland, of McClelland Bros., wholesale hardware merchants, Birmingham, England, is in Vancouver exploiting the advantages of the English market for hardware business in this country.

Mr. Jos. Gilmour, a shareholder of the Cramp Ontario Steel Co., is suing that company on behalf of himself and the other shareholders, and claims damages amounting to \$30,000, for procuring stock by fraudulent means.

The annual meeting of the Grey and Bruce Cement Co., Limited, Owen Sound, was held on December 8th, and was marked by the recall of Mr. James McLaughlan to the presidency. The old board of directors was re-elected.

Mr. N. E. Hamilton, recently of Toronto, who some time ago took up the city traveler's duties in Montreal for the Beardmore Belting Co., has made many friends and his energy has stimulated the trade to a marked degree.

Brown & Moore, the Northern Hardware Co., and the "Soo" Hardware Co., all of Sault Ste. Marie, have petitioned to have the Algoma Steel Co., the Algoma Commercial Co., and the Sault Ste. Marie Pulp and Paper Co. wound up.

Mr. Robert Donaldson, of Youville square, Montreal, is selling a fine variety of ice-cutting tools, also accessories for dairy and farming work that are all of a high grade. Mr. Donaldson personally supervises the manufacturing of these articles, which should be a guarantee of satisfaction as he is a practical worker himself.

Mr. Archie Macfarlane returned on Tuesday from New Britain, Conn., where he was visiting several of the firms he represents in Canada. On his return to Montreal Mr. Macfarlane was accompanied by Mr. C. F. Bennett, of the Stanley Works, who spent several days visiting the trade in Montreal. Mr. Macfarlane has been appointed Canadian representative of the Stanley



EMPIRE SHINGLES

**[Made of Tinned Steel.
Galvanized or Painted.]**

The only shingles made that are fully formed into shape first, and galvanized afterwards—no acids being used.

As a result, galvanized Empires have no raw edges or cracked surfaces exposed—they are the perfection of roof covering—absolutely fire, lightning and rust proof.

When you wish THE VERY BEST order EMPIRES.

METALLIC ROOFING CO.
WHOLESALE MANFRS. LIMITED
TORONTO, CANADA.

Works, and will look after their interests in all parts of Canada.

FIRST AMERICAN IRON WORKS.

The first iron works to be built in America were erected by the London Company, of London, England, in 1619. The company sent out one hundred and fifty skilled iron workers who erected furnaces along Falling Creek, a tributary of the James River, a few miles below Richmond, Va. The cost of constructing the furnaces and opening the mines amounted to \$200,000, which, for three years produced a good quality of iron. The name of the village which sprung up in the vicinity of the works was Warwick, in remembrance of Warwickshire, the district from which many of the workmen emigrated. Before the mines were successfully operated iron was manufactured from a bog ore gathered from the meadows in the neighborhood of the creek. All went well until one day in March, 1622, the Indians under Outechapan, surprised the village and murdered all the inhabitants with the exception of a boy and girl who hid in the woods outside of the village. So ended the first attempts to manufacture iron in that part of the continent which is now known as the United States of America.

CAVERHILL-LEARMONT DINNER.

On Wednesday evening Caverhill, Learmont & Co., Montreal, commemorated the fiftieth anniversary of the founding of Crathern & Caverhill, as the firm was first organized.

The dinner was an unbounded success. To those fortunate enough to be present it was an event long to be remembered. A full report is, on request, being held over to next week's issue of Hardware and Metal.

HARDWARE CONDITIONS IN MANITOBA.

(Market quotations corrected by telegraph up till 12 a.m. Friday, Dec. 23, 1904.)

Office of HARDWARE AND METAL
Room 515 McIntyre Block,
Winnipeg, Man.

WHOLESALE hardware trade is fairly quiet and many travelers are off the road. Retail business in the city has been brisk, many firms doing a particularly good holiday trade. A large amount of building is still in progress in the city and sorting orders have been numerous for this time of year. But on the whole, as compared with the activity a month or two ago, business may now be called slack. The retail trade are preparing for January stock taking and are not disposed to buy heavily.

Prices throughout are steady this week and there are no changes of importance to note. Window glass continues very firm in price owing, of course, to the strike in Belgium which has stopped supplies from that country. Winnipeg stocks are, however, well assorted and fairly ample. Hence in spite of the enormous demand in the Northwest owing to extensive building it is thought there will be little trouble in filling orders. There is very little activity in paints and oils. We quote:

Barbed wire, 100 lb.	\$2 85
Plain galvanized.....6 to 8	3 39
".....9 2 50	2 90
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....2 85	
Staples.....3 35	
Oiled annealed wire.....10	2 86
".....11	2 92
".....12	3 00
".....13	3 10
".....14	3 20
".....15	3 25
Annealed wires (uncoiled) 10c. less.	
Horseshoes, iron, No. 0 to No. 1.....	\$4 55
No. 2 and larger.....	4 30
Snow shoes, No. 0 to No. 1.....	4 80
No. 2 and larger.....	4 55
Steel, No. 0 to No. 1.....	4 70
No. 2 and larger.....	4 45
Horsenails, No. 4—1½ in., list price	0 48
" " 5—2 " " "	0 32
" " 6—2½ " " "	0 28
" " 7—2½ " " "	0 24
" " 8—2¾ " " "	0 22
" " 9—2½ " " "	0 20
" " 10—2½ " " "	0 20
" " 11—2½ " " "	0 20
" " 12—2½ " " "	0 20
" " 14—3½ " " "	0 20
Discounts on these prices are for "C" brand	
40, 10 and 7½ per cent., for other brands 55 and	
60 per cent. Add 15c. per box.	
Cut Nails—	Wire Nails—
2d 1 in.....\$4 00	1 in.....4 00
3d Fin. 1½ in.....4 00	1½ in.....4 00
3d 1½ in.....3 65	1¾ in.....3 65
4d 1½ in.....3 40	1½ in.....3 40
5d 1½ in.....3 40	1¾ in.....3 40
6d 2 in.....3 30	2 ".....3 30
8d 2½ in.....3 15	2½ ".....3 15
10d 3 in.....3 10	3 ".....3 10
20d 4 in.....3 05	3½ ".....3 05
30d 4½ in.....3 00	4 ".....3 05
40d 5 in.....3 00	4½ ".....3 00
50d 5½ in.....3 00	5 ".....3 00
60d 6 in.....3 00	5½ ".....3 00
	6 ".....3 00

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 00
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	9 50
Jessop.....	13 00
Black sheets, 10 to 16 gauge, 100 lb.....	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
28 gauge.....	4 10
Galvanized sheets—	
Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge.....	4 50
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Genuine Russian, per lb.....	11
Imitation.....	07
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05
Tinplate, 1C charcoal, 20 x 28, box.....	10 50
" IX ".....	12 00
" IXX ".....	14 00
Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.....	3 00
Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	8 25
Broken lots.....	8 75
Pig lead, 100 lb.....	4 50
Black iron pipe, ¼ inch.....	2 45
" ½ ".....	2 65
" ¾ ".....	3 00
" 1 ".....	3 80
" 1½ ".....	5 50
" 2 ".....	7 45
" 2½ ".....	8 95
" 3 ".....	12 30
Rope, sisal, 7-16 and larger, basis.....	10 75
Manila, 7-16 and larger, basis.....	15 25
Lath yarn.....	11 25
Solder.....	21
Axes, chopping.....	\$ 6 75 to 12 00
" double bitts.....	12 00 to 18 00
Bluestone.....	5 25
Screws, flat head, iron, bright.....	85 and 10 p.c.
Round ".....	80 p.c.
Flat " brass.....	75 and 10 p.c.
Round ".....	70 and 10 p.c.
Coach ".....	70 p.c.
Bolts, carriage, ¾ or smaller.....	60 and 5 p.c.
" 7-16 and up.....	55 p.c.
Bolts, machine, ¾ and under.....	55 and 5 p.c.
" 7-16 and over.....	55 p.c.
Bolts, tire.....	65 p.c.
Bolt ends.....	55 p.c.
Sleigh shoe bolts.....	65 and 10 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	55 p.c.
Square nuts, case lots.....	3c. discount.
" small lots.....	2½c. "
Hex " case lots.....	3c. "
" smaller lots.....	2½c. "
Rivets, iron.....	50 and 10 p.c.
Copper, No. 8.....	32½
No. 12.....	37½
Coil chain, 3-16 inch.....	9 25
" ¼ inch.....	7 25
" 5-16 inch.....	5 20
" ¾ inch.....	4 60
" 7-16 inch.....	4 45
" ¾ inch.....	4 30
" 1 inch.....	4 10
" 1½ inch.....	4 30
Spades and shovels.....	40 and 5 p.c.
Harvest tools.....	60 p.c.
Axe handles, turned, s.g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60
Files:	
" Arcade ".....	70 and 10 p.c.
" Black Diamond ".....	60 p.c.
" Nicholson's ".....	62½ p.c.

Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½c.
" tarred.....	80c.

Ammunition, cartridges, Dominion R.F.	
50 and 5 p.c.	
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
Ammunition, cartridges, American R.F.	33½ p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.
Loaded shells:	
Eley's and Kynoch's soft, 12 gauge	
black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00
Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 50
Powder, F.F., keg, Hamilton.....	4 75
F.F.G., Dupont's.....	5 00
Tinware, pressed, retinned.....	70 and 10 p.c.
" plain.....	75 and 2½ p.c.
" pieced.....	30 p.c.
Japanned ware.....	37½ p.c.
Enamelled ware, white.....	45 p.c.
" Famous.....	50 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Silver Star, per gal.....	22½c.
Sunlight.....	23½c.
Eocene.....	25½c.
Pennoline.....	26c.
Crystal Spray.....	25c.
Silver Light.....	23c.
(In barrels f.o.b. Winnipeg.)	

SCRAP.

No. 1 cast iron.....	\$14 to 15
No. 2 ".....	7
Wrought iron scrap.....	5
Copper (heavy).....	8½c. per lb.
Yellow brass (heavy).....	7½c. "
Light brass.....	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2½c. "
Zinc scrap.....	1c. "

PAINTS, OILS AND GLASS.

White lead (pure).....	\$5 00 to \$5 50
Putty in bladder, 2½ lb. in 100 lbs. keg.....	0 2½
Turpentine, pure, in barrels.....	\$ 0 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
Boiled.....	0 58
Lubricating oils, heavy castor machine.....	0 26½
" extra engine.....	0 27
" dynamo.....	0 38
" back.....	0 22
" cylinder.....	\$0 50 to 0 80
(as to quality)	
Harness oil.....	0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00½
" 2nd pressure.....	1 09½

WINDOW GLASS.

16-oz. O.G., single, in 50-ft. boxes—	
16 to 25 united inches.....	\$2 25
26 to 40 ".....	2 50
16-oz. O.G., single, in 100-ft. cases—	
16 to 25 united inches.....	4 00
26 to 40 ".....	4 25
41 to 50 ".....	4 75
51 to 60 ".....	5 25
61 to 70 ".....	5 75
21-oz. C.S., double, in 100-ft. cases—	
26 to 40 united inches.....	6 30
41 to 50 ".....	7 35
51 to 60 ".....	8 40
61 to 70 ".....	9 45
71 to 80 ".....	10 50
81 to 85 ".....	11 55
86 to 90 ".....	12 60
91 to 95 ".....	14 70
96 to 100 ".....	17 35

Notes.

As most readers of Hardware and Metal in Manitoba and the Territories are probably aware, the hardware stock of Macdonald & Fleming, of Winnipeg, was badly damaged by fire last week. It is gratifying to learn that the stock

was well insured, but this firm must necessarily stand to lose considerable money owing to the interruption of their business if to nothing else. They were doing a good Christmas trade as they carried a full line of holiday goods. As they are obliged to look for other quarters they are selling off their whole stock at reduced prices.

The J. H. Ashdown retail store is being put up rapidly and this enterprising firm are doing a rushing holiday trade at the old stand, very little hampered now by the builders. The plate glass windows are now put in and the window displays of holiday goods would do credit to any store to say nothing of one which is only half built.

Retail business during Summer and Fall has been very large in all lines of builders' hardware. In fact it is generally said by Winnipeg retail hardware men that 1904 has been the best year in the history of the hardware trade in the city. The amount of building accounts for the large turn over of goods and to the Winnipeg Retail Hardware Association should be ascribed the credit for the profits which have been made. "A hardware man who couldn't make money in Winnipeg this year," said a retailer to Hardware and Metal, "should get out of the business. It must be his own fault."

Mr. Norman S. Hutchison, of the J. H. Ashdown wholesale establishment, left Winnipeg last week via Chicago to spend the Christmas holidays in Toronto and Montreal.

Messrs. J. H. Ferguson and G. Miller, of Geo. D. Wood & Co., are also among the number of Winnipeg hardwaremen who are spending Christmas holidays in Montreal and Toronto.

Mr. J. R. Martin, of the Canada Metal Co., Toronto, has returned east, having completed his regular tour of the territory between Winnipeg and Victoria.

Among the hardware business men visiting Winnipeg last week was Mr. Hugh McClelland, of Birmingham, who registered at the Mariage. He is a member of the firm of McClelland Bros., wholesale hardware merchants of Birmingham, and he is in this country looking into the opportunities for extending the export business of his firm. He is of the opinion that the dumping regulations will help English hardware merchants in extending their Canadian trade as the chief difficulty with which they have to contend has been the underselling of American firms. He considers the dumping regulations of as much value as the preference. Mr. McClelland has gone to Vancouver.

Mr. D. W. Ferguson, of Hartney, Man., was in Winnipeg last week visiting the wholesale trade.

GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, Montreal.

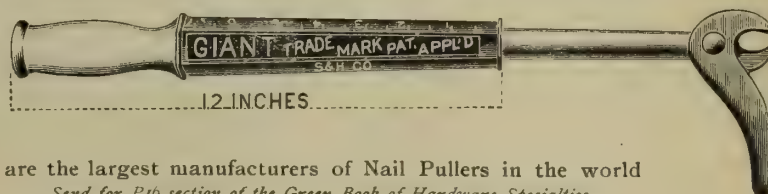
Galvanized Sheets

are of a quality inferior to none. Price by no means the highest.

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.

GENUINE GIANT NAIL PULLERS.

Made of Bo-Ras-ic Steel, with heavy Rammer and Tight Grip Claw.



We are the largest manufacturers of Nail Pullers in the world

Send for P16 section of the Green Book of Hardware Specialties.

UTICA DROP FORGE & TOOL CO.,

Mfrs. Nippers and Pliers

SMITH & HEMENWAY CO.,

Mfrs. Cutlery and Hardware Specialties

294 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL. ALLEN C. JENKING, Canadian Manager

New houses going up.

New Furnaces going in.

Cement is wanted.

The best Cement.

—Get STERNE'S.

—For Furnaces or Stoves.

—Nothing like it.

—Perfect.

—Sold on the money-back plan.

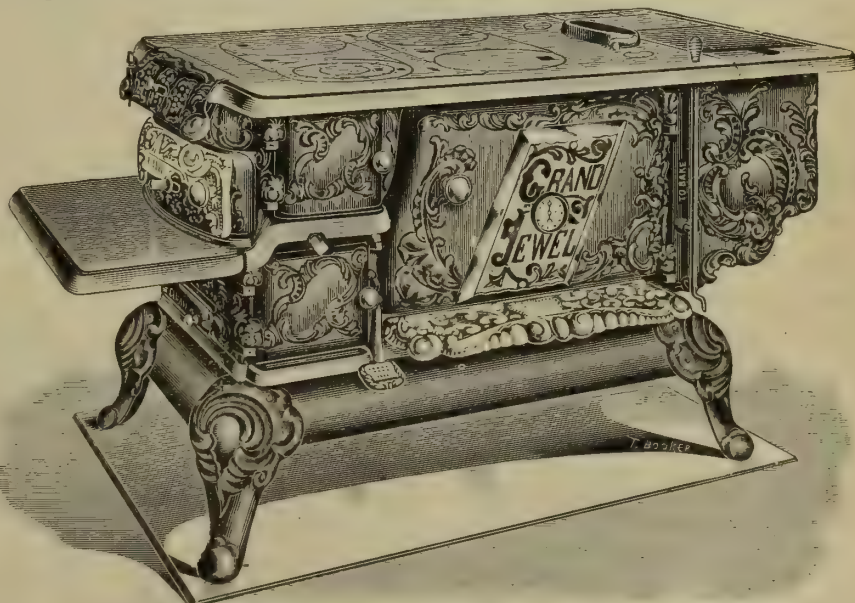
SEND FOR CIRCULAR

G. F. STERNE & SON, Sole Makers, Brantford, Ont.

J. H. HANSON, 422 St. Paul St., MONTREAL, Eastern Agent.

The Grand Jewel Coal Cook Stove

is a new stove of the very highest class, specially adapted for burning Hard or Soft Coal; can also be used for burning Wood



Two Sizes—Square

Duplex Grate of improved pattern. No space left between grate and fire-box linings, so that no ashes or cinders can pass between or accumulate, so as to interfere with its easy working. One movement of the crank cuts out the dead ashes and cinders and drops them into ash pan.

The Duplex Grate when reversed forms a perfect WOOD fire bottom, and with all the coal linings in position 17 inch wood can be used. Special Wood Linings can be supplied to admit wood 24 inches long.

Two Sizes—with Tank

The Oven is our standard one piece Sheet Steel Oven, same as our Grand Jewel Wood Cook, which has been so wonderfully popular and successful. This Oven will never warp nor crack. With a Steel Oven much less fuel is expended in getting up a baking heat, and less required to keep the stove running.

The Oven is well ventilated.

Oven Door Thermometer.

Water Front for either size supplied when ordered

Manitoba
Depot

MERRICK, ANDERSON & CO.,

Winnipeg

PAINT, OIL AND BRUSH TRADES

Selecting Brushes.

A PAINT BRUSH IS A TOOL—NOT MERE MERCHANDISE.

TOO often in the selection of paint brushes and in placing an order "quality" does not receive sufficient consideration. While it is always prudent to select a merited article, giving due consideration to both quality and price, or in other words selecting best values, it is often a difficult task in connection with this particular article.

Some small makers, in order to sell at low prices, do so by cutting and skimping the quality wherever possible, this being necessary in the cheapening process, owing to the great scarcity of bristles during the past few years, which has forced these smaller manufacturers into the practice of mixing a percentage of fibre, horse hair, etc., with bristles as a substitute for all bristles. Then, again, there are the cheap imported brushes, which are practically "seconds," as the usual custom of foreign manufacturers is to select all first quality materials for the home trade, which of course is the main factor upon which they are dependent, and the materials which are not considered good enough for their home trade are made into brushes for export, and are given an extra outside finish, giving them a fine appearance, and are sold at apparently low prices, but when put to the test are found to be exceedingly poor value.

There is more in a paint brush than actually shows up in a mere examination, as often an apparently good brush when put in use will prove unsatisfactory—hairs twisting and coming out, falling to pieces and not working properly—which is a most vital point in paint brushes.

Consider a brush with perfect elasticity, composed entirely of bristles, no loose hairs, and finished in a style that will always give satisfaction. Such a brush must be supplied by the manufacturer whose lines are to remain in favor with the Canadian dealer, and buying standard goods of our Canadian manufacturers, who put their name and brands on their goods, is a guarantee that your customers will get satisfaction, as in view of their depending almost entirely upon the Canadian market for the distribution of their goods, it is their policy to make only first quality standard goods.

ONE THAT ALWAYS PLEASES.

As time passes by the "Boeckh" brush is taking a more prominent position on the Canadian market. By diligent advertising the quality of this make of brushes is brought to bear most emphatically upon the minds of the hardware merchants. The result has been that the brush when once used has always been used.

Oil Runs in the U. S.

The average daily runs in the Kansas oil fields in November amounted to 21,206.42 barrels, a total of 636,192.60 barrels for the month. The daily consumption for the month averaged 5,415.39 barrels, a total of 162,461.72 barrels. This means that 473,730.88 barrels were put in storage over and above the consumption.

Reports on the movement of Texas oil in November indicate a falling off of fully 300,000 barrels, compared with the October record. In October the movement from Port Arthur and Sabine

amounted to 837,937 barrels, and in September it was 856,488 barrels.

The Strike in Europe.

THE Belgian window glass strike continues with only seven factories in operation. Recently the strikers held a meeting and resolved to continue the strike till next May, and if manufacturers by that time did not restore the old wages, they would emigrate. Just where they are to locate has not been divulged.

The strike of the window glass workers in the Netherlands bids fair to be prolonged through this Winter. One of the works at Schiedam recently succeeded in getting six men to resume work, but as no others could be induced to return to work, the fires are drawn. At a recent meeting of the strikers it was decided by an almost unanimous vote that no individual should enter into negotiations with employers, and no conferences looking towards a settlement of the strike should be countenanced except by the regularly elected committee empowered to act in behalf of the workers' union.

Compliments of the Season.

A Merry Christmas

and

A Happy New Year

to All.

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED.

"The Standard Goods of Canada."

BOECKH'S BRUSHES and BROOMS

DO YOU HANDLE THEM?

United Factories, Limited,
Head Office: TORONTO.

BRANCHES:
MONTREAL
LONDON

If You Buy

Varnishes	Paints
Japans	Colors
Lacquers	Glues
Stains	Bronzes
Fillers	Chamois
	Sponges

WRITE TO

R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.

AMERICAN WINDOW GLASS CO. Pittsburg, Pa.

are now prepared to do business in Canada in

Machine Made Glass

for prompt and later deliveries. Good
Quality Packing and Fair Treatment—our
motto.

OUR BUSINESS IS NOT DELAYED BY STRIKES

WRITE US FOR QUOTATIONS.

GERALD LOMER,
Sole Canadian Representative, MONTREAL

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Dec. 24, 1904.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Dec. 24, 1904.

PAIN'T travelers have been on the road for a few weeks soliciting orders for the coming year's business, and judging from the success of their efforts prospects for the coming year are unusually good.

Owing to the advance in raw material, there has been a general stiffening in the price of manufactured goods, and special attention is called to these changes, which are quoted below. Turpentine and linseed oil remain unchanged, but ground white lead, dry white lead, dry white zinc, white zinc in oil, putty, orange mineral, red lead, and litharge, have all been advanced.

Turpentine—Single barrels, 78c per gallon; 2 to 4 barrels, 77c per gallon. For smaller quantities than barrels 5c extra per gallon is charged. Standard gallon is 8.6 lbs. The above prices are net thirty days, for longer terms prices are higher.

Linseed Oil—Raw, 1 to 4 barrels, 44c; 5 to 9 barrels, 43c; boiled, 1 to 4 barrels, 47c; 5 to 9 barrels 46c; delivered in Ontario between Montreal and Oshaway at 2c per gallon in advance.

Ground White Lead—Best brands Government standards, \$4.60 to \$4.75; No. 1, \$4.35 to \$4.50; No. 2, \$4.10 to \$4.25; No. 3, \$3.77 1-2 to \$3.87 1-2; No. 4, \$3.40 to \$3.50, all f.o.b. Montreal.

Dry White Lead—\$4.50 in casks, and in kegs, \$4.75.

Dry White Zinc—Pure dry in casks, 7c, in 100 lb kegs, 7 1-2c; No. 1 zinc, in casks, 6c, in 100 lb kegs, 6 1-2c.

White Zinc (ground in oil)—Pure, 25-lb tins, 7 1-4c; No. 1, 6 1-4c; No. 2, 5 1-4c.

Putty—Bulk in barrels, \$1.50; in 25-lb tins, loose, \$1.80; in tins, \$1.90; bladdered putty in barrels, \$1.75.

Orange Mineral—Casks, 7 1-4c; 100-lb kegs, 7 1-2c; smaller quantities, 8 1-2c.

Red Lead—Genuine red lead in casks, \$4.50 in 100-lb kegs, \$4.75; in less quantities at the rate of \$5.75 per 100 lbs; No. 1 red lead, casks, \$4.25; kegs, \$4.75, and smaller quantities, \$5.50.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

Litharge—Ground, in casks, 5c; in less quantities, 53-4c; flake litharge, casks, \$5.50; smaller quantities, \$6 per 100 lbs.

TRAD E among local jobbers and manufacturers during the past week has been quiet. Few orders have been received, as the largest portion of the retail merchant's spare time has been devoted to the requirements of prospective purchasers, leaving but a scant amount of time to look over stock. Thus orders have not been sent in except in cases where the article was absolutely required.

Owing to the small production of glass during the last seven months the stock of imported glass is very scarce. It is difficult to describe the outlook for the trade for next Spring, but, it is thought there will be no decline in the price, even if all the factories should begin immediate operations, as the demand caused by the long delay will be extensive.

There is a good demand for putty which is being used by the local contractors on the newly erected warehouses. The firm condition of pig lead has caused many to believe that the price will very soon advance. The keen competition in mixed paints is counted on by the jobbers to stop the price from advancing, although large amounts of lead and zinc are used in the manufacture. Reports indicate an advance of 1 cent on turpentine at manufacturing centres. A small amount of linseed oil is moving and trade is quiet.

White Lead—Ex-Toronto, pure white lead, \$4.75; No. 1, \$4.30; No. 2 \$4; No. 3, \$3.60; No. 4, \$3.35 in packages of 25 lbs and upwards; 1-2c per lb extra will

be charged for 12 1-2 lb packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs, \$4.25; ditto, in kegs of 100 lbs, \$4.50; No. 1, in casks of 500 lbs, \$3.75 to \$4; ditto in kegs of 100 lbs, \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs; Gilders' whiting, 75c.

Shellac—Pure orange in barrels, \$2.75 to \$3; white, \$2.85 to \$3.10 per barrel; No. 1 (orange), \$2.25.

Linseed Oil—Our quotation is: Raw, 1 to 4 barrels, 45c; boiled, 48c; 5 to 9 barrels, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Another quotation is: Raw, 1 to 4 barrels, 45c; boiled, 48c; 5 to 9 barrels, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, 2 per cent. off 30 days; net 30 days to outside points. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 77c; 2 to 4 bbls, 76c, Toronto; 5 bbls and over f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls. 77c; 2 to 4 bbls, 76c, ex Toronto; 5 bbls and over f.o.b. point of shipment, 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Ordinary, bladders in barrels, \$1.65; pure linseed oil, \$2 to \$2.10; bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Dealers in Paints and Painters' Supplies.

Have you ordered your season's supply of 'Church's Cold Water

ALABASTINE

for 1905? "Do it now" and insure having good assortment when season opens.

Alabastine is time tried and time tested. Is advertised and in demand. Sells on its own merits, and gives that degree of satisfaction as will impel a customer to visit your store again when in want of reliable goods in wall-coating and other lines as well.

Alabastine is a stone-like cement that hardens with age. Beware of imitations—cold water preparations under whatever name or claims. **The cold water process is patented.**

Jobbers everywhere sell **Alabastine**. Write us for particulars. Address

The Alabastine Co., Limited, Paris, Ont.

We Wish You all
A _____
Most Merry Christmas

STANDARD PAINT AND VARNISH CO.
WINDSOR LIMITED



ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

We have about ten tons of No. 6 galv. wire which we offer at a snap. Quality guaranteed.

The Oshawa Wire Fence Co.
Limited.
OSHAWA.



**Wire
Spark
Guards**

Polished Brass and
Enamelled

Catalogue on request

DENNIS WIRE & IRON CO.,
LONDON. ONT.

McCaskill, Dougall & Co.

Manufacturers
UU

RAILWAY, CARRIAGE AND BOAT VARNISHES.
HIGH-GRADE FURNITURE and HOUSE VARNISHES
MONTREAL.

ABOUT GLUES

What kinds do you handle
Are you and your customer
satisfied? Perhaps we can
give you a better article at a fairer figure. Our SCOTCH GLUES will be found
of exceptional strength, and equal to many glues for which much higher prices
are charged. Let us send samples.

GROVE CHEMICAL CO. Ltd., Appley Bridge,
Lancashire, Eng.

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.
LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works
or from the principal Color Dealers in Canada



TWO LEADERS

Island City Aluminum Paint

Island City Gold Paint.

You should have a good stock of
these for the holiday season. They
are good lines to handle.

P. D. DODS & CO., Montreal  Toronto  Vancouver

Welcome Christmas!

"Let fall the curtain, wheel the sofa round,
"And while the bubbling and loud-hissing urn
"Throws up a steamy column, and the cups,
"That cheer but not inebriate, wait on each,
"So let us WELCOME peaceful evening in."

—Cowper.

"At Christmas play and make good cheer
"For Christmas comes but once a year!"

—Tusser.

TO OUR MANY FRIENDS
AT HOME AND ABROAD:
WE HEARTILY WISH YOU
ONE AND ALL

A MERRY
CHRISTMAS
AND A
HAPPY
NEW YEAR

THE
CANADA PAINT
COMPANY
LIMITED

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.35 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 8 to 8 1-2c per lb and 9c for single tins.

Glass—See current quotations at the end of this issue.

Window Glass.

MONTREAL.

The window glass situation continues pretty much as before. Some of the smaller dealers have sold out their stocks, but even with this condition prevailing there is no glass famine in sight, as the larger jobbers are getting in stocks, which, however, must be sold at advanced prices. The outlook for future supplies, however, is none too bright. The employes of the Belgian glass manufactories are in a position financially to hold out until Spring, so that there is little likelihood of a resumption of activity in those quarters for some time. Our quotations are as follows: first break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet, \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent. discount 30 days.

Petroleum.

Refined—Merchants are endeavoring to have as small an amount of oil on hand at the first of the year—when stock is taken—as possible. As a result, trade is quiet. It is noted that the quotations of independent companies are 1-2c lower on Canadian, and 1c higher on American than the quotations given below. Our quotations are as follows: Canadian water white, 17 1-2c; Canadian prime white, 16c; American water white, 18c, ex warehouse.

Crude—Owing to the quietness of trade a general decline of from 4c to 10c is noted. Our quotations are: Pennsylvania, \$1.55; Corning, \$1.22; Newcastle, \$1.47; North Lima, \$1.04; Tiona, \$1.70; South Lima, 99c; Whitehouse, 96c; Somerset, 96c; Indiana, 99c; Canadian, \$1.47.

MACHINERY

MACHINERY MARKETS.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Dec. 22, 1904.

A FEATURE more noticeable than the amount of business being done in machinery circles at present is the prevailing spirit in which dealers, while satisfied with passing trade, are confident of a large volume of trade in the near future. "There never was a time," said a representative machinery dealer, "in which we had an outlook for such a large volume of business pending as at present."

Ordinary business is somewhat quieter, but a fair movement exists in smaller machine tools, supplies, and electrical machinery. Stock taking is in order, and a general straightening up of business for the year. Inquiries are very numerous.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Dec. 23, 1904.

THE machinery market exhibits an interesting aspect just now. Local men report the volume of business being done as much greater than at this time last year. The prospect is that there will be considerable buying during the early part of the coming year.

Inquiries are coming in freely for nearly all kinds of machinery, but probably there is a greater run on wood working machinery and engines and boilers than on the other lines. Electrical machinery also has a very good demand. Machine tools are not receiving the attention that some of the other lines are, but notwithstanding there is a satisfactory movement.

Machinery and Electrical Notes.

The Niagara-Welland Power Co. are asking for power to build a tramway along its right of way, and for an extension of time to complete works.

Reinke & Boland, owners of the Dominion Planing Mills at Eganville, Ont., intend shortly to greatly increase their amount of wood working machinery.

The Kingston Locomotive Works Co. has received an order for ten mogul

passenger engines for the Canadian Pacific Railway Co. The engines will weigh 195,000 lbs. each and the tenders 126,000 lbs. each.

There will be a new illuminating light company in the New Brunswick field very shortly. A company has been organized in Sydney, N.S., by H. E. Cook, of Boston, which has purchased the charter issued to the New Brunswick Gas and Power Co.

The affairs of the Canadian Electric Light Co., of Quebec City, are the cause of much concern to the many shareholders in Quebec, Levis, and vicinity. It appears that the company is immediately called upon to pay \$8,400 to meet interest due on bonds, and in the month of March next, another \$12,000 will be needed to meet a similar payment. The liabilities of the company amount to over \$889,000, which includes bills and accounts payable amounting to over \$150,000; 2,210 shares capital stock at \$100 each, amounting to \$221,000; five hundred and seven first mortgage sold at \$500 each, \$278,000; sixty-three do. (collected security) \$31,500, and second mortgage bonds sold at \$500 each, amounting to \$170,000, etc. The assets consist of real estate, pole line, construction, tracking, etc., valued at \$572,861.01; store goods, etc., \$2,829.21; furniture, etc., \$3,945.75; accounts payable, \$14,076.77; bonds in mining and in collected security, \$230,500, etc. The board of directors and a committee recently appointed by the shareholders are trying to ameliorate matters and prevent liquidation.

New Alloy of Aluminum.

An alloy of aluminum, called zimalium, has been recently produced in Germany. It is formed by adding small quantities of manganese and zinc to aluminum in fusion. It is harder than pure aluminum and takes the tool better. A sheet of the metal shows a traction resistance of 25 to 35 kilos per square millimeter, which is double that of aluminum. The wire has an elongation of ten per cent. The cast metal is easily filed, forged and drilled. The alloy has a lower conductivity, but its price is ten to twelve per cent. less than aluminum.

Montcalm Tested.

THE new Canadian ice-breaker "Montcalm" was tested in the St. Lawrence this week and her performance was entirely satisfactory to the Minister of Marine and Fisheries, who had the matter in hand. A number of prominent members of Parliament and others were on board the ship, which left Quebec and made a trip of thirty miles in two hours. Despite the fact that in some places the ice was nine inches thick the vessel experienced no difficulty in forcing her way through. It is felt that the result of this test will have an important bearing on the navigation of the St. Lawrence.

The river was full of floating ice from six to eight inches thick when the steamer left her moorings. The vessel proceeded up stream at the rate of twelve knots an hour, going through the fields of floating ice with perfect ease, and not in the least impeded in her speed. The vessel's triple expansion engines worked beautifully. Hon. Mr. Prefontaine, who evidently took a deep interest in the strength of the ice-breaker, never left the deck during the trip, which lasted two hours. The Montcalm was headed for Cap Rouge, where it was expected that the ice was thickest, and the fittest location in the river, on account of the narrows, to test her strength and capacity for breaking through the ice. When the site of the new Quebec bridge across the St. Lawrence was reached, the ice became more densely packed, but proved no obstacle to the ice-breaker. She simply ploughed her way through and continued on to St. Augustin, some fifteen miles above Quebec, without the least apparent effort, notwithstanding that she had to force her way through one solid mass of ice that covered the surface of the river from shore to shore.

Return was made to Quebec at a good speed and the performance of the vessel went to show that this step on the part of the Minister of Marine and Fisheries will likely lead to a further adoption of a system of ice breakers.

THE METALLURGICAL ENGINEER IN THE FOUNDRY

THE name is against him. It looks as though he would be a theoretical crank, that his ideas would be based on theories only and would conflict with common practice. This is quite possible. It is certain to be so unless his training has been a good one; unless he has step by step learned the actual details of foundry work. But if he has begun by getting into actual contact with every practical detail and has had a theoretical education, such that it has instilled into his mind the fundamental principles underlying all metallurgical processes; then by bringing these two educations to bear together he should prove a valuable assistant and adviser to the man who has not had these combined advantages.

Some foundrymen and managers in other industries feel that they may acquire this special knowledge and save the expense of expert service. Some do acquire such knowledge, but they are the exception and not the rule, and even so it is my opinion that some important branch may suffer as a consequence and that a manager's time may be better spent. Some think they know it all and try it only to find that "a little knowledge is a dangerous thing" and then go back to old methods.

The case is directly comparable to that of the lawyer. All business men acquire or know more or less law. Some really are very well up in it and rarely have to consult a lawyer. Others think they are and do not seek expert assistance when they should do so, with the result that they get into legal difficulties from which some lawyer must finally extricate them at a far greater expense than would have been the case originally.

There is nothing more true than the fact that it is easier to keep out of trouble than get out of trouble.

A little money spent systematically for the services of a metallurgical engineer (not a chemist), pure and simple, may save far greater sums. It is very much in the nature of an insurance against loss. Conditions may seem so favorable for months at a time possibly; materials may be received of such uniform and satisfactory quality that money spent for expert services will appear to be wasted and therefore the plan discontinued. Then of a sudden may be received shipments of coke or iron, which had they entered the cupola would have ruined at least one day's produc-

tion before discovery, and the loss would have paid an expert for some time.

A good chemist may be able to determine the amounts of various elements in irons or fuels to the third decimal to the minimum limit of chemical error. He may be quick and do a large number of determinations per day. But of what use are results without practical interpretation and application? A chemist may become the best kind of a metallurgist, but only by the one way I have referred to; personal contact with metallurgical operations in every detail and in several branches. A good share of common sense is a most valuable and necessary adjunct.

A metallurgist need not be a chemist, but he must know how to use a chemist and the results obtained by the chemist. The chemist is an absolute necessity to the metallurgist.

The steel industry is the most marked example of an industry thriving under the care of expert metallurgists assisted by chemists. The two are rarely united in one person, each being busy in his own field.

Rule of thumb methods gave way to exact methods about 1870 in the iron and steel industry to a marked degree. Blast furnace practice, from being a hazardous, uncertain process full of difficulties became a process of certainty with the advent of technical knowledge. All because the furnaceman with his secrets gave way to the metallurgist and his open and exact methods, subject to the inspection of all concerned. Then of course these same methods grew with the then infant steel industry and became an essential part of the industry. That which is common practice now would not be possible at all without the chemist to analyze under the direction of the metallurgist and with his interpretation of results.

Foundry and blast furnace practice is complicated in its reactions as compared with steel, and really needs expert knowledge as much if not more than steel making, providing, of course, results anywhere near uniform are desired. Yet it is only of late that any expert knowledge has entered foundry practice of the general jobbing or manufacturing trade. It had been used as an accepted necessity by all foundries owned by the steel works or closely associated with them for many years.

The argument has been that the small foundry could not afford the services of a metallurgist because his output did not

warrant the outlay. Or that the small producer has said it did not matter, his product was so small that it was not a necessity. As though what little he made might not be more important as far as quality is concerned than the crude product of a large concern.

It is no longer necessary for a foundry, large or small, to employ the exclusive services of a metallurgist. One may be found in nearly all the large manufacturing centres of the east or west who is at the service of the general foundry trade on very reasonable terms. As a rule these experts have their own chemical and physical laboratories; a necessity in nearly every problem under their investigation.

Every analysis the metallurgist should ask for ought to count in getting at results. What a lot of good time and acid is wasted in determining the amount of graphitic carbon in pig iron for cupola work. The total carbon is the only vital carbon result worth consideration in connection with iron to be used for melting.

The amount of graphite is a measure of the time of cooling of the iron in which it exists. It depends on the initial heat of the molten iron; on the character of the mold in which it was cast; whether dry sand, wet sand or an iron mold, and on the volume of the casting. It may be varied at will by varied speeds of cooling and to conclude all carbon returns to the same conditions when melted, regardless of its condition when solid.

It is instructive in a finished product because it so strongly influences the physical characteristics of cast iron, but valueless in pig iron for melting purposes.

One writer advocates physical tests only, another chemical tests only, another no tests at all and so on. As a matter of fact each kind of test is most instructive in its own particular field and an intelligent use of all kinds is the best practice. The thoroughly practical metallurgical engineer is the one that uses any one or all as the case demands and thereby gets the best results.

Now it has been thought that the small foundryman has less use for expert knowledge than the large one. I find the contrary to be true. Of the two the small producer is liable to the greater irregularities of product. The large buyer purchases in large shipments and either he analyzes every one and keeps them separate thereby using them most intelligently, or he throws them into large piles. The latter being the case

About a Horse Nail.

"A little neglect may breed great mischief; for want of a Nail the shoe was lost; for want of a shoe the Rider was lost—being overtaken and slain by the Enemy—all for want of care about a Horse-Shoe Nail."

—Benjamin Franklin, 1758

Just a few words about ourselves and our "C" brand horse nails.

This Company was established in 1865, and we have therefore been manufacturing horse-shoe nails for 39 years. We make nothing else, and are the largest producers of horse nails in Canada; we believe nearly equal to all the other makers combined.

Our "C" brand horse nails are of one quality only—the best that our long experience can produce. We use for their manufacture exclusively a special quality of material, made for our purpose in Sweden, which is the best procurable in the world, or used by any maker of horse nails.

We use the old and well-tried hot forged process, by which the nails are thoroughly forged by special

machines from the nail rods at a white heat, and finished and pointed by a mechanical process used only by us in Canada.

Every nail is hand sorted and examined, to prevent any imperfect nails from entering a box bearing our "C" brand. Every box is therefore warranted perfect and ready for immediate use.

Our nails are of the best designs and proportions for Canadian use. They will drive easiest, and stand more hard usage than any other horse nail made or sold elsewhere.

We solicit your kind preference for the "C" brand horse nails when ordering.

We shall be glad to furnish free samples of our various patterns to farriers or dealers.

CANADA HORSE NAIL COMPANY, MONTREAL.

ASBESTOS

AND ITS PRODUCTS ARE
PROFITABLE LINES FOR HARDWARE DEALERS.

We are sole Canadian Selling Agents for

The H. W. Johns-Manville Co. of New York,

Manufacturers of Asbestos in Sheets, Blocks and Squares, Asbestos Roofings, Pipe Coverings, Cements, Asbestos Stove Linings, Sheathings and Building Paper, Asbestos Rope Packing, Vulcabeston Packing and Gaskets.

We carry a large stock of Asbestos goods in Montreal. Prices are right and delivery prompt.

WE CAN SUPPLY ANYTHING MANUFACTURED FROM ASBESTOS.

SEND FOR ASBESTOS CATALOG.

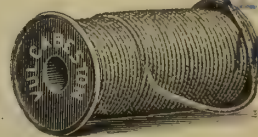
THE FAIRBANKS CO.

MONTREAL

TORONTO

VANCOUVER

WINNIPEG



RETURNED To Owner

AN 20 1905

Book 29

page 11

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RETURNED

AN 20 19

then he uses from these large heaps not in the same order in which it was piled, but instead in a different order, consequently getting an average from the pile for a day's melt.

In case there have been wide variations in the chemical character of the various shipments they will be hidden in the average, which will be about normal, certainly not bad enough to cause serious trouble at any time unless there has been a succession of bad shipments, the badness being all of one kind. This is not likely to occur and the large user is fairly safe. On the other hand the small buyer may have only a few car loads in the yard possibly of one kind and that kind way up in sulphur or all one way in some other bad respect. Not knowing it and without the advantage of averaging conditions the day's product may be very bad from his standpoint.

It is, therefore, plain that the small consumer needs more help in proportion to his tonnage than the large consumer. His cost charge for expert service will be greater per ton, all other things being equal but not heavy even at that in consideration of possible benefits and savings and the small tonnage.

Assuming an engineer of metallurgical matters is employed, then to get the greatest benefit the work must be systematized. Regular tests of product must be made often if changes are made in the mixture, and frequently, or at least in the event of the slightest irregularity of product. Not as often if changes are unfrequent or in case of very smooth running, but never less often than weekly, so that a record may be preserved of good normal work as well as product out of the normal.

Some one person at the works must make it part of his duty to follow up the correspondence with the metallurgical engineer. To report to the purchasing agent any invoice of iron that is not as good as ordered. The purchasing agent may then reject the iron if it is too bad to use at all or offer to take it at a reduced price commensurate with its real value if it is possible to use it somewhere. On the other hand if the iron is better than ordered (which often happens), then it may be laid aside to be used as an offset to some bad car load when the occasion arises. The same remarks apply to fuel and all other materials purchased.

It is certain that some one person must give it attention to gain the best results and also certain that much money over and above the charges of the engineer and chemist will be saved. But like any system, such as cost or inventory, if it is not followed up, not only will there be no saving, but there will be the loss of the original expense in introducing it.

It is not my intention to show the detail wherein an engineer may save his client, but more to show his sphere of action. Examples are numerous and familiar to all those that have tried it with success and those that have tried it and failed certainly did not take advantage of opportunities.

There is a feeling among many foundrymen that the employment of a metallurgical engineer will result in great friction with the iron dealers, because of the probable fussy demands of the engineer. I want to state an exactly opposite view. The intelligent engineer knows exactly what to ask for and exactly what may be had in the market at ordinary prices. He puts before his employer the simplest possible specification that will bring him the kind of pig iron he wants. The limits may be very wide and still give uniform castings for a product with intelligent mixing of several irons.

When such an iron is received by the foundry and is found to be within the reasonable limits specified, then there can be no more question between buyer and seller. The responsibility rests on the engineer who specified it.

On the other hand a very confused state of affairs is often found. The foundryman orders Excelsior brand No. 1 pig iron like the last he had. It arrives and the first day he puts it into his cupola he may get a lot of dirty castings or something else abnormal. He does the natural and obvious thing on the face of it, and lays the trouble to this new shipment of pig iron in the absence of accurate information. He then promptly writes a letter of protest to the furnisher of the iron and perhaps refuses to take it if the difficulty has been a serious one. Then follows a long dispute, further trials of the iron, dissatisfaction between buyer and seller and after all it may never have been the iron in question that caused the trouble. This is not a coincidence that has come once under my observation, but many times, and is the result of a great deal of friction.

What few remarks I have heard made by iron dealers have been favorable to the intelligent and practical metallurgical engineer. If they furnish what they are asked to furnish they know they will be paid for it.

On the other hand, an inexperienced engineer, not familiar with the manufacture of pig iron and the conditions affecting its quality may demand unreasonable composition and quality. Then there is sure to be friction and cause for just complaint on the part of the seller.

Hamilton Sub-Station Contract.

The Hamilton Cataract Power, Light and Traction Co. have just purchased two motor generator sets from the Canadian Westinghouse Co., Limited. Each consists of a synchronous motor and a direct current generator. The motor generator sets will be of the two bearing type, the generator delivering current at 550 volts to the railway system, and each being rated at 750 k.w. The synchronous motors will take two-phase current of 8,000 alternations and 2,400 volts and will be rated at 1,380 horsepower. The excess of capacity in the motors is provided so that they may be used for raising the power factor of the transmission system. Power is taken through lowering transformers from the high tension transmission lines from the DeCew Falls station of the company.

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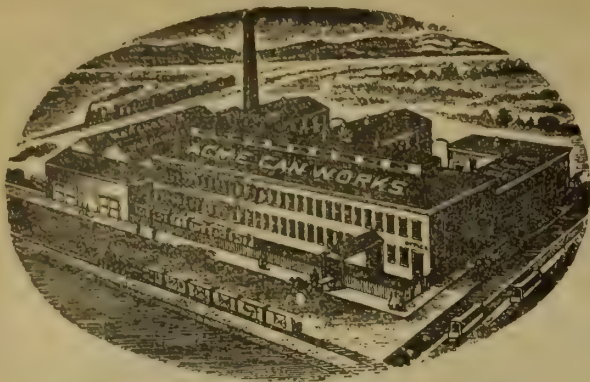
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We are the only makers in Canada of

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They are our specialties.

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Just Why

our range is better than any other we know of is said best in our catalogue which we ask every stove dealer in the Dominion to send for.

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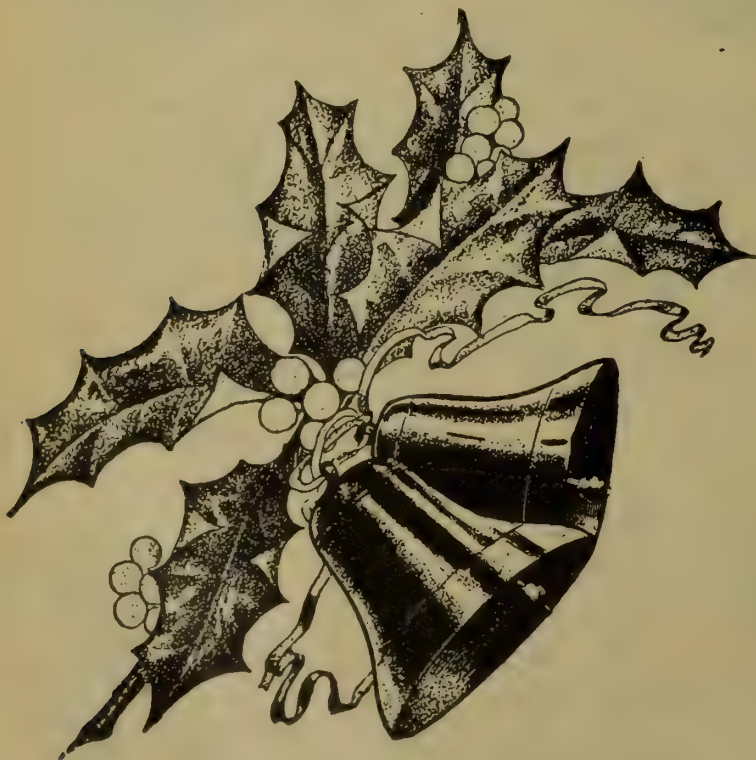
has all the best features found in other good ranges, and many new ones. It has a design distinctly its own, which, combined with a rich nickel dress, makes it an exceedingly handsome range.

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are the talking points of the **Empire Queen**. **AGENTS WANTED.**

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We wish you a

**Right
Merry
Christmas**

What will bring most merriness at Christmas time is the thought of good business done. If you have been handling the **Imperial Oxford Range** your business has been good.

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CORRESPONDENTS: The Gurney-Massey Co., Limited, Montreal, Que.; The Gurney Standard Metal Co., Limited, Calgary, Alta.

THE NORTHWEST COMMERCIAL TRAVELERS' ASSOCIATION.

AT a meeting held in Winnipeg business men of the west, Mr. Dyson is during the last week in November, the members of the Northwest Commercial Travelers' Association made their nominations for the executive for the year 1905. The president, vice-president and treasurer were elected by acclamation, but there was a close contest for the election of directors, fifteen names being placed in nomination for the eight seats. At a second meeting, held in the board room of the Grain Exchange on the evening of Saturday, Dec. 17, the result of the balloting, which had been in progress for more than two weeks, was announced. The new executive consists of the following members:

President—John Horne, of Campbell Bros. & Wilson. Elected by acclamation.

Vice-President—D. J. Dyson, of The Dyson Co. Elected by acclamation.

Treasurer—L. C. MacIntyre, of Paulin-Chambers Co. Elected by acclamation.

Past President—F. H. Agnew, of The James Robertson Co., becomes a director for 1905.

Directors—W. W. Bole, of The Bole Drug Co.; G. F. Bryan, of G. F. Bryan & Co.; A. Congdon, of A. Congdon & Co.; F. W. Drewry, of The Redwood Factories; T. H. Murphy, of The Royal Crown, Limited; F. M. Morgan, of The Amies Holden Co.; J. E. McRobie, of The James Robertson Co.; R. Neve, of Codville & Co.

Board of Directors for British Columbia. All elected by acclamation.

Vice-President for Vancouver—E. W. Gerster, of Martin & Robertson.

Vice-President for Victoria—H. H. Welch, of B. C. Soap Works.

Directors for Vancouver—Thos. Parkinson, of F. T. Stewart & Co.; F. A. Richardson, of The Amies Holden Co.

Director for Victoria—F. J. Hall, jr., of Turner, Beeton & Co.

Director for New Westminster—T. A. Cunningham, of Cunningham Hardware Co.

Director for Kootenay. Geo. Nunn, of Alex. Macdonald & Co.

Mr. John Horne.

The newly elected president is a type of the modest, unassuming man whose good qualities, against his will perhaps, force him to the front and secure for him a well merited popularity among his associates. In his speech at the second meeting thanking the association for the honor they had conferred on him, he indulged in no rash promises as to his programme for 1905, but it was evident that the members were unanimously of the opinion that the interests of their association are safe in his hands. Mr. Horne is well known among the "knights of the grip," and also among the grocery trade of the Northwest. For nine years he was city traveler for Codville & Co., of Winnipeg, and during the last five years he has been connected with Campbell Bros. & Wilson, of the same city. He has traveled extensively through Manitoba and the Territories, and is thoroughly in sympathy with the troubles of his fellows.

Mr. D. J. Dyson.

Mr. D. J. Dyson, of the Dyson Co., is "one of the boys," having been an active traveler for many years, although for the last six months he has been steadily inside. His election as vice-president is a very popular one among the travelers. Like most successful

one of the wise men who knew enough to come from the east years ago. In 1891 he was a member of the London, Ont., firm of Gorman, Dyson & Co., now known as Gorman, Eckert & Co. In that year Mr. Dyson caught the western fever, and coming west he founded the firm known as the Dyson-Gibson Co., now the Dyson Co. In building up his present prosperous business he has covered the territory from Winnipeg to the coast many times, and he has a wide acquaintance among the western trade who will be glad to hear of the honor conferred on him. He has served the association during the last year as a director, and that experience, coupled with his three years' experience as a member of the Winnipeg City Council, should make him an efficient vice-president.

Mr. L. C. MacIntyre.

The treasurer of the association is now entering on the ninth year of his service in that most important office, and his long term and recent re-election by acclamation are sufficient testimony to the esteem in which he is held by the association. Among themselves, commercial men are always plain talkers, and they are frank in their criticisms. The only criticism of Mr. MacIntyre was that he is over zealous in his protection of the association's funds, and surely that criticism is the highest compliment which could be paid to a treasurer. Mr. MacIntyre came to Winnipeg from Victoria County, Ontario, in 1882. For ten years he was a traveler for Turner, McKeand & Co., wholesale grocers of Winnipeg, and for the last 12 years he has been manager of the Paulin-Chambers Co.

The President's Report.

For an association with 1,550 members the attendance at the meeting held on Saturday evening, Dec. 17, was disappointingly small. Evidently the members have confidence in their executive, or they would attend in larger numbers to receive their reports, but the officers are men who welcome criticism and discussion as always beneficial. The retiring president, F. H. Agnew, of the Jas. Robertson Co., presided, and after the minutes of the previous meeting had been confirmed he presented his annual report. It showed that the last year has been an increasingly prosperous one, both from a financial and numerical standpoint. The total membership is now 1,550, which is an increase for 1904 of 309 members. The membership is apportioned as follows: Winnipeg, active, 1,216; honorary, 26; life, 2. British Columbia, active members, 306.

The British Columbia branch was reported as flourishing. It shows an increase of 76 members for the year. The report announced that in accordance with a resolution passed at the general meeting, and in order to cement more firmly the bond between the head office and the British Columbia branch, a request had been sent to the B. C. board to appoint and send a delegate to the annual meeting and entertainment, at the general expense of the association.

The report called attention to the blank hotel reports which have been freely distributed this year and largely

made use of by the members. It was gratifying to note the visible improvement in the condition of a large number of the hotels. There was still a good work to be done before all cause for complaint is removed in the Northwest.

The retiring president stated that an application had been received from some of the members resident in Calgary, asking for special representation, and for the appointment of a secretary in Calgary. The board find that the membership with headquarters in Calgary is not yet large, and they recommend, after careful consideration of the matter and examination into the facts in connection therewith, that the request be not granted.

The report showed that the association had lost twelve members by death, namely: Messrs. W. T. Walters, Moses Bamber, J. Schroeder, Hy. Atkinson, R. G. Gordon, Thos. Roney, S. Kirkpatrick, H. H. McLean, W. F. Irwin, and C. F. Hostler, Winnipeg members; and Messrs. Jno. Ibbetson and H. Orchard, B. C. members. The several claims on the mortuary benefit fund were promptly paid.

This gratifying report, after some discussion, was adopted unanimously.

The Treasurer's Report.

Mr. MacIntyre's report showed the finances of the association to be flourishing. The increase in gross receipts over 1903 was \$3,570.39, or over 26 per cent., whereas the expense account has increased only \$342.90, or about \$1.10 for each new member added to the roll. The assets amount to \$62,288.22.

The treasurer's report, which was finally adopted, was naturally the subject of considerable discussion. It was suggested by some members that the association would save money by carrying its own accident insurance, but the general opinion of the meeting was evidently against this proposal.

The association own some real estate on Lombard street, Winnipeg, which was bought some years ago for the purpose of erecting on it a club for the members. The various executives have had the project under consideration for several years, and they have evidently come to the conclusion that the undertaking was too great. Treasurer MacIntyre favors the selling of the association's real estate. A motion by A. L. Johnson and seconded by the treasurer, expressed the opinion that it would be advisable for the executive to sell the property. This occasioned a long, spirited, and at times heated, discussion, and the motion was finally carried by a majority of only four. It was argued that it would be unwise to invest all the funds of the association in a building which might be profitable and again might not. Several members stated that the club rooms in the east were little used by the members of the association. There was evidently a strong feeling in favor of a social meeting place for the members, and a motion was passed asking the executive to take immediate steps to rent suitable club rooms.

Report of Scrutineers.

The last order of business was the report of the scrutineers. Some 420 ballots were cast. The result of the election was announced as above. After speeches from the officers elect, and various votes of thanks, the meeting adjourned.

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Buy the Best.



HERCULES

Sash Cord.

Star Brand Cotton Rope

Star Brand Cotton Clothes Lines

Star Brand Cotton Twine

For Sale by all Wholesale Dealers.

STOVES AND TINWARE.

How Tin and Terne Plates Are Made.

By W. B. Stewart in Cosmopolitan.

(Concluded from last issue.)

THERE are two methods of tinning, the acid and the palm oil processes, the former being the one now usually employed. By the oil process, which formerly was the only one known, a batch of black plates are boiled for 20 or 25 minutes in palm oil. This causes them to lose any water or acid which might have adhered to them. From the boiling-pot the plates are taken to a pot of melted tin, or terne, and there immersed. From this first dipping-pot, where the plates leave their traces of the oil bath, they are taken to a second pot, where they are allowed to remain soaking for some time. Then they are laid on the "hob," a flat space near the pots, where they are thoroughly brushed. After whatever oxide or dross may have adhered to them has thus been removed, the plates are given their third and final metal bath, the third pot containing metal of extra purity. There yet remains a final bath, this time in oil, in which rolls are running, which smooth the surface and regulate the amount of coating.

THE ACID PROCESS.

In the acid process, muriate of zinc is used in place of oil, and a single bath is sufficient to give the required coating of tin or terne. The action of muriate of zinc is very energetic, and only a small quantity of it is necessary to evaporate the water or other acid adhering to the black plates. The muriate of zinc forms a thin layer on top of the pot of molten tin, and the plates are passed down through it into the boiling metal, then carried along underneath by means of rolls and guides, and taken out at another part of the pot where the surface is covered with oil. A single pot, therefore, by the new acid process, accomplishes the same result that four pots were needed for under the older system. The thickness of the tin coating is regulated by the speed at which the plates are drawn out through their metal bath. This is adjusted with great nicety, so that the manufacturer knows to an ounce how much of the coating is to adhere to the plate. Formerly the plates were just dipped—a quick dip for a thin coating, a longer one for a thick layer.

With the completion of the operations of rolling and dipping the metal sheets, the work of the tin plate manufacturer ends. The various forms which the plates are afterward made to assume for use in the arts and the economy of the kitchen, are given them by the stamping mills and the tinsmiths' shops. The simple tinsmith is now a very much less important part of the trade than formerly, for the rapidity with which all sorts of vessels can be now turned out has taken away much of his custom.

THE OLD AND THE NEW WAY.

The old method of cutting sheet tin into sections and creating culinary utensils, etc., by soldering these into various forms, has been almost wholly sup-

erseded by stamping them into their desired shapes with dies and other mechanical appliances. There still are considerable quantities of the old "piece-made" or soldered pans and other similar vessels sold, but the demand now is largely for the new styles of seamless ware. The twentieth century housewife esteems her kitchen and pantry as worthy the display of artistic discrimination only in less degree than her drawing room, and the care bestowed in the selection of sizes and patterns almost equals that given to the more ornate objects of domestic economy. The clumsy devices once accepted in tinware have given place to others of artistic design and elaborate ornamentation. For art no longer retires to the parlor, but graces with her presence the kitchen as well.

All tinware-making is not so simple an operation as the merely stamping of the flat plates into various shapes. Many kinds of tinned goods are japanned—that is, painted over with a special mixture; and many others are enameled, in which process there are important points which must be considered. Cake baskets, canisters and tea trays are examples of japanned tinware.

ENAMELLING GOODS.

To form enameled goods the black plates as they come from the rolling mill are specially treated before the coating is applied, being subjected to a bath in some non-corrosive metal, such as silver, aluminum, nickel, or cobalt, which hermetically seals the pores of the basal metal and insures absolute cleanliness. The enamel is then first flushed over the article and then burnt in in a muffle of many hundred degrees of heat. In this operation the expert knowledge of the chemist is added to the skill of the mechanic. Many new problems in chemistry and metallurgy constantly arise in the making of this class of goods, and hardly a week passes in an enameling factory that does not see experiments with some new invention calculated to meet a new condition which has arisen.

The constituents of the enamel coating of culinary vessels must be free from deleterious substances of any description. In plumbers' goods, where sanitation is the sole object, copper or lead may be used as an adhesive, but in making kitchenware nothing poisonous can be employed. The use of lead, arsenic or antimony by the manufacturer in the enameling of such articles is, or should be, scrupulously avoided.

Many thousands of persons are employed in the manufacture of kitchen sheet-metal goods, and many millions of dollars of capital invested in the plants where the stamping and forming are carried on. Heavy machines are necessary to press the metal sheets into the shapes required, and deft fingers to do the soldering of the parts together. A visit to one of the "five and ten cent" stores will give an idea of the extent to which this branch of the industry has contributed to the comfort and economy of the modern household.



Solarine Bar Polish

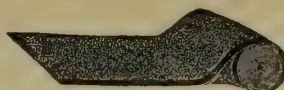
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A rapid cleaner expressly designed for all kitchens.

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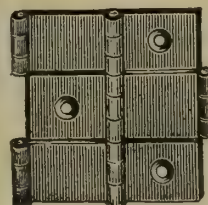
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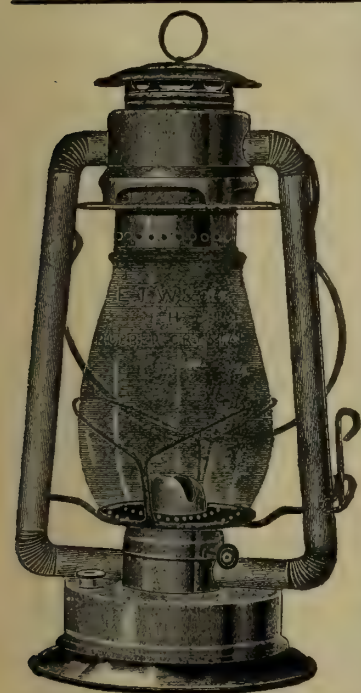
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Cabinet Hinges and Cabinet Brass-ware of all descriptions, Drawer Pulls, Fancy Handles, Castors, etc. We are makers of every kind of cast and stamped Brassfoundry, and we want your trade. What line can we quote you?

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Don't book your order for lanterns until you see our improved **COLD BLAST LANTERN** and get our prices for 1905. We lead, others follow.
E. T. WRIGHT & CO.,
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POP
THAT
THE
SUN
NEVER
SETS
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A Mop is Good

for floors, oil-cloths, linoleums, stoops, etc. Indeed there is nothing better. Your customers will say yes to this. But it requires a

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to get best results—Self Wringing. Notice—the old fashioned kind won't do.

Your Jobber Has Them

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1904

Christmas Greetings.

We desire to take this opportunity to wish our many Customers and Friends a very Merry Xmas, and to return our hearty thanks for the liberal patronage extended to us during the past year.

The Thos. Davidson Mfg. Co., Limited

Montreal, Q.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE rolling mills and plant of the Iron and Steel Company of Canada, which were offered for sale by public auction on December 16, were bought in on a reserve bid. Only two bids were made, one of \$25,000, made by M. Sessenwein, of Montreal, and another of \$50,000, made by Mr. H. Corby, of Belleville.

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It is learned from a reliable source that another mining company will be organized in the Soo within a few days. The gentlemen interested in the proposition are C. W. Baldwin, E. Demar, O. G. Brubaker, A. B. Stanish, A. E. Sharpe, S. T. Handby, A. B. Davidson, R. P. Hudson and F. P. Sullivan, all of Bruce Mines, Ont. The company will commence operations on property in Algoma.

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At a meeting of the shareholders of the Canada Cycle and Motor Co., Toronto, which was held on December 15th, a final effort was made to get the shareholders who had not deposited their share certificates to do so, and thereby secure the benefit to be distributed pro rata by the cancellation of the \$900,000 preference stock. It was decided to start a branch company in New Zealand with a capitalization of \$50,000. The following directors were re-elected: Jos. N. Shenstone, J. W. Flavell, E. B. Ryckman, Hon. Geo. A. Cox, Hon. L. M. Jones, Warren Y. Soper and T. A. Russell.

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Canada produced a total of \$63,306,690 in economic minerals in 1903, an increase from \$22,584,513 in 1896. From 1894 to 1903 Canada's export of lumber and wood products increased from \$27,780,352 to \$40,868,016. There were in 1901 twenty-five pulp mills as against five in 1881, and the invested capital was \$11,555,560, with an output of \$4,246,781, giving employment to 3,177 hands. In 1904 the Department of Agriculture published a list showing forty-four pulp and fibre mills in Canada, in addition to six under construction. Their capacity is 1,250 tons a day and the capital

invested is about \$20,000,000. During 1903 the total output of the pulp mills of Canada was \$5,220,000, of which \$3,013,441 was exported and \$2,206,451 remained for home use. Of the exports, Great Britain took \$865,826, the United States \$1,899,448 and other countries \$248,167.

NOTES.

Gas has been struck at the Northwest Gas and Oil Company's well near Edmonton.

The defunct Northrop Iron Works, Valleyfield, Que., are to be started in a few days by the Fairbanks Scale Mfg. Co.

The Cramp Steel Company, Limited, has been reorganized and is now known as the Northern Iron and Steel Company, Limited.

Negotiations between the town of Fort William and the C.N.R. for the location of the Atikokan Iron Company at Fort William, are practically completed.

A splendid flow of gas has been struck on the premises of Goold, Shapley & Muir Co., Brantford. Drilling operations have been going on for some time.

English capitalists are coming to Vancouver for the purpose of looking over the ground with the view to the establishment of a new steel plant on the coast.

Incorporation is asked for a railway running from a point on the C.P.R. between Woodstock and London, to St. Mary's and thence west through Perth and Lambton to Lake Huron.

The plant of the Imperial Steel and Wire Company of Collingwood, Ont., has been put into commission. The company has enough orders on its books to keep the machinery running till the end of next May.

The Canadian Straw Fuel Machine Co., Winnipeg, contemplate putting on the market a machine to compress the straw which the farmers are burning year after year as waste product, into what is called "straw wood."

The Midland Railway, running between Truro and Windsor, Nova Scotia, has been sold to the Dominion Atlantic

Railway, which will take possession on January 1st. The purchase price was \$1,250,000.

During the year 1904 there was brought from Nova Scotia, by way of the St. Lawrence River, 1,391,592 net tons of coal as compared with 1,061,287 net tons in 1903, an increase of 330,305 net tons.

Joseph Hobson, chief engineer of the G.T.R.; H. W. Walker, general auditor; F. Scott, treasurer, and H. Phillips, secretary, are the names given in a charter of incorporation of a company to build railways, docks, etc., with a capital of \$250,000.

COMPANIES INCORPORATED.

The United Lumber Co., Montreal, capital \$250,000; purpose to manufacture and deal in lumber. The directors are: Geo. A. Forbes, F. Richardson, Geo. H. Bisset, R. T. Heneker and J. J. Robson, all of Montreal.

Campbell Lumber Co., Weymouth, N. S., capital \$75,000; purpose to manufacture and deal in sawn timber, lumber, etc. The directors are: G. A. Kohl, W. P. Sharp, R. C. McMichael, F. G. Bush and F. Wilkinson, all of Montreal.

Muskoka Lakes Milling and Supply Co., Toronto, share capital \$40,000; purpose to buy timber and manufacture lumber and wooden articles. The directors are: A. E. Henderson, A. Ogden, A. D. Watson, and R. I. Henderson, all of Toronto, and A. A. Young of Rosseau.

The Farmers Manufacturing and Supply Co., Durham, share capital \$100,000; purpose to manufacture and deal in goods, wares and merchandise. The directors are: Geo. Binnie, Wm. D. Mills, N. McIntosh and Thos. Livingston, all of Durham, and E. Lackie, of Toronto.

Steel Radiator Co., Toronto, share capital \$500,000; purpose to manufacture and sell radiators, heaters, steam fixtures and fittings and other heating apparatus. The directors are: C. E. Saford, of Buffalo, J. G. Smith, N. Sinclair, F. Morrison, and S. Watson, all of Toronto.

Thomson Monument Co., Toronto, share capital \$40,000; purpose to manufacture, buy, sell, or otherwise deal in granite, marble, stone and all materials used in the construction of monuments. The directors are: P. Thomson, Wm. Thomson, Jas. Hawken, and R. Macdonald, all of Toronto.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

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Warren White Sulphur Springs,
Totten P.O., Virginia.

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Sample for 10 cents.

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**"Windmill Best"
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Cut Prices Made by Quality Right

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F. HANKIN, - Montreal

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Manufacturers and Contractors
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**Metal Fireproof Windows
CORRUGATED IRON**

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

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TORONTO, ONT.



This design a guarantee of quality

WATERPROOF WRAPPING PAPER

For Express and Long Distance Packages Put up in rolls 36 in. wide, 250 and 300 yards in a roll. Clean paper on both sides—waterproof substance in the centre—therefore it will not soil or stain delicate goods as ordinary waterproof paper will. Practically odorless. May be used either for case lining or wrapping packages.

CANADA PAPER CO.

SAMPLES AND PRICES WITH PLEASURE. TORONTO LIMITED MONTREAL

61

—Merry Christmas!

—We feel like going all over
Canada, to see you all and to
wish you a Merry Christmas.

62

We've had a good year.

You have been good to us.

We have good-will in our
hearts toward all you men.

C. M. CUTTS & CO., SOLE MAKERS Toronto Junction, Ont.

**Pedlar's "Perfect" Metal Lath**

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.

24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.**

are many

Ask for our quotations—they will interest you.

JOLIETTE, QUE.

[illegible]

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

GALVANIZED IRON RANGE BOILERS.		
Capacity. Gals.	Standard.	Extra heavy
12	4.00	6.00
18	4.25	6.00
24	4.50	6.50
30	4.50	6.50
35	5.50	7.50
40	6.50	8.50
52	10.50	13.00
66	16.00	19.00
82	19.00	22.00
100	24.00	29.00
120	28.00	35.00

SOIL PIPE AND FITTINGS.
Med. and Extra heavy pipe and fittings, dia. 60 per cent.
7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.		Per lb
Bar, half-and-half, guaranteed	0 18	
Bar, half-and-half, commercial	0 17	

PAINTS AND OILS.

COLORS IN OIL.		1-lb. tins, pure.
Venetian red, per lb.	0 08	
Chrome yellow	0 15	
Golden ochre	0 08	
French	0 06	
Marine black	0 04	
Chrome green	0 10	
French permanent green	0 13	
Signwriters' black	0 15	

WHITE LEAD.		Per 100 lb.
Pure	4 75	
No. 1	4 50	
No. 2	4 25	
No. 3	3 87½	
No. 4	3 50	
Munro's Select Flake White	4 75	
Elephant and Decorators' Pure	4 75	
Monarch	5 00	
Decorators' Pure	4 75	
Essex Genuine	4 25	
Sterling Pure	5 00	
Island City Pure	5 00	
Ramsay's Pure Lead	4 75	
Ramsay's Exterior	4 50	4 75

RED LEAD.		
Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs,	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.		
Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.		
Pure, casks	4 25	
Pure, kegs	4 50	
No. 1, casks	4 00	
No. 1, kegs	4 25	

PREPARED PAINTS.		
In ½, 1 and 1-gallon tins.		
Pure, per gallon	1 20	
Second qualities, per gallon	1 00	
Barn (in bbls.)	0 60	0 90
The Sherwin-Williams paints	1 35	
Canada Paint Co.'s "Art" B'd	1 25	
Toronto Lead & Color Co's pure	1 25	
Sanderson Peary's pure	1 20	
Standard Co.'s "New Era"	1 30	
"Globe" barn	60	
Francis-Frost Co.'s "Art" B'd	1 25	
British Navy deck	1 50	
Henderson & Potts's "Anchor"	1 35	
Ramsay's paints, Pure, per gal.	1 20	
"Thistle	1 00	
"Outside, bbls	0 55	0 65
Island City House Paint	1 25	
"Floor	1 25	
Sterling House Paint	1 20	
"Floor	1 10	
National	1 05	

PUTTY.		
Bulk in bbls.	1 45	
Bulk in less quantity	1 70	
Bladders in bbls.	1 70	
Bladders in kegs, boxes or loose	1 85	
25-lb. tins.	1 80	
12½ lb. tins	2 05	
Bladders in bulk or tins less than 100 lb.	1 85	

VARNISHES.		
In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
Hard oil finish	0 90	1 00
Light oil finish	1 35	1 50
Damar	1 60	1 70
Shellac, white	2 40	2 50
"orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
"No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granitine floor finish, per gal	2 75	
Maple Leaf coach enamels: size 1, \$1.20; size 2, 70c; size 3, 40c, each.		
Sherwin-Williams' kopal varnish, assorted case, from	1 to 1 gal., \$2.50.	

GLUE.		
Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner	0 12	0 16
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.		
Cartridges.		
B. B. Caps Dominion, 50 and 5 and 25 per cent.		
American \$2.00 per 1000.		
O. B. Caps American, \$2.60 per 1000.		
Rim Fire Pistol, discount 30 p.c., American.		
Rim Fire Cartridges, Dominion, 50 and 5 p.c.		
Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent., American.		
Central Fire Pistol and Rifle, list net Amer.		
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.		
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American		
10 per cent. advance on list.		
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.		
American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.		
Brass Shot Shells, 55 per cent.		
Primers, Dom., 30 per cent.; American, \$1.75		

Wads.		
	per lb.	
Best thick brown or grey felt wads, in ½-lb. bags	\$0 70	
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99	
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35	
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20	
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25	
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.	
11 and smaller gauge	0 60	
9 and 10 gauges	0 70	
7 and 8 "	0 90	
5 and 6 "	1 10	
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—		
11 and smaller gauge	1 15	
9 and 10 gauges	1 40	
7 and 8 "	1 65	
5 and 6 "	1 90	

ADZES.		
Discount 20 per cent.		
ANVILS.		
Wright's, 80-lb. and over	0 10½	
Hay Budden, 80-lb. and over	0 09½	
Brook's, 80-lb. and over	0 11½	
APPLE PARERS.		
Woodyatt Hudson, per doz., net	4 50	
AUGERS.		
Gilmour's, discount 65 and 5 per cent. off list.		
AXES.		
Chopping Axes		
Single bit, per doz.	7 00	10 00
Double bit, "	10 00	18 00
Bench Axes, 40 per cent.		
Broad Axes, 25 per cent.		
Hunters' Axes	5 50	6 00
Boys' Axes	6 25	7 00
Splitting Axes	7 00	12 00
Handled Axes		10 00
AMERICAN AXE AND TOOL CO.		
Red Ridge, boys' handled	5 75	
"hunters' handled	5 25	
Underhill American Bench Axes, 40 p.c.		
AXLE GREASE.		
Ordinary, per gross	6 00	7 00
Best quality	10 00	12 00

BELLS.		
Hand.		
Brass, 60 per cent.		
Nickel, 55 per cent.		
Cow.		
American make, discount 63½ per cent.		
Canadian, discount 45 and 50 per cent.		
Door.		
Gongs, Sargent's	5 50	8 00
"Peterboro", discount 50 and 10 per cent. off new list.		
Farm.		
American, each	1 25	3 00
House.		
American, per lb.	0 35	0 40
BELTING.		
Extra, 60 per cent.		
Standard, 60 and 10 per cent.		
No. 1, not wider than 6 in., 60, 10 and 10 per cent.		
Agricultural, not wider than 4 in., 75 per cent.		

BITS.		
Auger.		
Gilmour's, discount 60 per cent.		
Rockford, discount 50 and 10 per cent.		
Jennings' Gen., net list.		
Car.		
Gilmour's, 47½ per cent.		
Expansive.		
Clark's, 40 per cent.		
Gimlet.		
Clark's, per doz.	0 85	0 90
Diamond, Shell, per doz.	1 00	1 50
Nail and Spike, per gross	2 25	5 20

BLIND AND RED STAPLES.		
All sizes, per lb.	0 07½	0 12
BOLTS AND NUTS		
	Per cent.	
Carriage Bolts, common (\$1 list)		
" 3-16 and ½"	60 and 10	
" 5-16 and ¾"	55 and 5	
" 7-16 and up	55 and 5	
" full sq. (\$2.40 list)	60	
" Norway Iron (\$3 list)	60	
Machine Bolts, all sizes, ½ and less	60	
Machine Bolts, 7-16 and up	60	
Plough Bolts	55 and 5	
Blank Bolts	55 and 5	
Bolt Ends	55 and 5	
Sleigh Shoe Bolts	70	
Cosch Screws, cone point	70	
Nuts, square, all sizes, 4c. per lb. off.		
Nuts, hexagon, all sizes, 4½c. per lb. off.		
Stove Rods per lb., 5½ to 6c.		

BOOT CALKS.		
Small and medium, ball	per M.	4 25
Small heel		4 50
BRIGHT WIRE GOODS.		
Discount 62½ per cent.		
BUTCHERS' CLEAVERS.		
German	per doz.	6 00 9 00
American		12 00 18 00
BUTCHER KNIVES.		
Bailey's	per doz.	0 60 6 30

BUILDING PAPER, ETC		
Tarred Felt, per 100 lb.		1 85
Ready roofing, 2-ply, not under 45 lb. per roll		0 90
Ready roofing, 3-ply, not under 65 lb. per roll		1 15
Carpet Felt	per ton	45 00
Heavy Straw Sheathing	per ton	35 00
Dry Sheathing	per roll, 400 sq. ft.	0 40
Tar	" 400 "	0 50
Dry Fibre	" 400 "	0 55
Tarred Fibre	" 400 "	0 65
O. K. & I. X. L.	" 400 "	0 70
Resin-sized	" 400 "	0 45
Oiled Sheathing	" 600 "	1 00
Oiled	" 400 "	0 70
Root Coating, in barrels	per gal.	0 17
Roof "small packages	"	0 25
Refined Tar	per barrel	5 00
Coal Tar	"	4 00
Coal Tar, less than barrels	per gal.	0 15
Roofing Pitch	per 100 lb.	1 00
Slater's felt	per roll	0 60

BULL RINGS.		
Copper, \$2.00 for 2½-inch, and \$1.90 for 2-inch		
BUTTS.		
Wrought Brass, net revised list.		
Cast Iron.		
Loose Pin, discount 60 per cent.		
Wrought Steel.		
Fast Joint, discount 70 to 70 and 5 per cent.		
Loose Pin, discount 70 to 70 and 5 per cent.		

CARPET STRETCHERS.		
American	per doz.	1 00 1 50
Bullard's	"	6 50

CASTORS.		
Bed, new list, discount 55 to 57½ per cent.		
Plate, discount 52½ to 57½ per cent.		

CATTLE LEADERS.		
Nos. 32 and 33	per gross	7 50 8 50

CHALK.		
Carpenters' Colored, per gross	0 45	0 75
White lump	per cwt.	0 60 0 65
Red	"	0 05 0 06
Crayon	per gross	0 14 0 18

CHISELS.		
Socket, Framing and Firmer.		
Broad's, discount 60 and 10 per cent.		
Warnock's, discount 50 and 10 per cent.		
P. S. & W. Extra, discount 60 and 10 per cent.		

FOODS—STOCK.		
Colonial Stock Foods, 50c. packages,		
" " " 25c. pkgs.,	per doz	\$4 00
" " " 10c. "	"	2 00
" " " 25-lb. pall, each	"	1 80
Poultry Foods, 25c. packages		1 25
Cough Powders, per doz.		1 25
Worm	"	1 25

International 1 Stock Foods, \$1 packages, per doz.		8 00
International Stock Foods, per pall		2 75
" Poultry " \$1 pkgs. per doz.		10 50
" Worm Powders, 50c. pkgs.		4 00
" Pine Healing Oil, per doz		8 00
" Phenol-Chloro, \$1 pkgs. per doz		8 00
" Hoof Ointment		8 00
" Compound Absorbent		16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz		

CLOTHES REELS.		
Davis Clothes Reels, dia. 40 per cent.		

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.				GAUGES.				Clothes line, No. 61..				Cabinet.			
Plain or Corrugated.				Marking, Mortise, Etc.				Harness.....				Eagle, discount 30 per cent.			
2-inch.....per 100 feet				Stanley's, discount 50 to 55 per cent.				Hat and coat.....per gro.				English and Am.....per doz.			
3.....				Wire Gauges.				Chandelier.....per doz.				Eagle, discount 20 to 25 per cent.			
4.....				Winn's, Nos. 26 to 33.....each				Wrought Iron.				Padlocks.			
5.....				GILLET'S POWDERED LYE.				Wrought hooks and staples				Machine Screws.			
6.....				1-case, \$3.70; 3-case, \$3.60; 5-case and over,				Wire.				Iron and Brass.			
				\$3.50.				Hat and coat, discount 60 per cent.				Flat head, discount 25 per cent.			
CRADLES, GRAIN.				HALTERS.				Belt.....per 1,000.....				Round head, discount 20 per cent.			
Canadian, discount 20 to 25 per cent.				Rope, 1-inch.....per gross				Screw, bright, discount 60 per cent.				MALLETS.			
CROSSCUT SAW HANDLES.				Rope, 1 to 1 1/2-inch.....				HORSE NAILS.				Tinmiths'.....per doz.			
S. & D., No. 3.....per pair				Rope, 1 1/2 to 2-inch.....per doz.				"P.B." Brand, 55 to 60 per cent.				Carpenters', hickory,.....			
S. & D., " 5.....				Leather, 1 1/2".....				"C" brand, 40, 10 and 7 1/2 per cent. off list				Lignum Vitae.....			
S. & D., " 6.....				Leather, 1 1/2 ".....				"M" brand, 55, per cent.				Caulking, each.....			
Boynton pattern.....				Web.....				"Monarch," 50 and 7 1/2 per cent.				MATTOCKS.			
				HAMMERS.				"Peerless" 50 per cent. dis.				Canadian.....per doz.			
DOOR SPRINGS.				Nail.				HORSESHOES.				MEAT CUTTERS.			
Torrey's Rod.....per doz.				Maydole's, discount 5 to 10 per cent. Canadian				F.O.B. Montreal				American, discount 3 1/2 per cent.			
Coll, 9 to 11 in.....				discount 25 to 27 1/2 per cent.				"P.B." brand, new pattern, base.....				German, 15 per cen			
English.....				Tack.....				"M." brand, base.....				Gem.....each			
				Magnetic.....per doz.				Add 15c. Toronto, Hamilton, Guelph.				MILK CAN TRIMMING.			
DRAW KNIVES.				Canadian.....per lb.				JAPANNED WARE.				Discount 25 per cent.			
Coach and Wagon, discount 50 per cent.				Ball Peen.....				50 per cent.				NAILS.			
Carpenters' discount 60 and 10 per cent.				English and Canadian, per lb.				PICKS.				Cut.			
DRILLS.				HANDLES.				Star.....per doz.				2d.....			
Hand and Breast.				Axe, 2nd growth, per doz. net				KETTLES.				3d.....			
Miller's Falls, per doz., net list.				Store door.....per doz.				Brass spun 7 1/2 per cent. discount off new list.				4 and 5d.....			
DRILL BITS.				C. & B., discount 40 per cent., revised list.				Copper.....per lb.				6 and 7d.....			
Morse, discount 37 1/2 to 40 per cent.				Hoe.				American, 60 and 10 to 65 and 5 per cent.				8 and 9d.....			
Standard, discount 50 and 5 to 55 per cent.				C. & B., discount 40 per cent., revised list.				KEYS.				10 and 12d.....			
FAUCETS.				Saw.				Lock, Canadian dis. 40 to 40 and 10 per cent.				16 and 20d.....			
Common, cork-lined, discount 35 per cent.				American.....per doz.				Cabinet, trunk and padlock,				30, 40, 50 and 60d (base).....			
RAVETROUGHS.				Plane.				American.....per gross				Cut nails in carlots 5c. less.			
10-inch.....per 100 ft.				American.....per gross				KNOBS.				Wire nails in carlots are \$2.20 (base).			
ELBOWS (stovepipe.)				Hammer and Hatchet.				Door, japanned and N.P., per				Steel cut nails 10c. extra.			
5 and 6-inch, common.....per doz.				Canadian, discount 40 per cent.				doz.....				Miscellaneous wire nails, discount 15 per cent			
7-inch.....				HANGERS.				Bronze, Berlin.....per doz.				Coopers' nails, discount 30 per cent.			
Polished, 15c. per dozen extra.				Steel barn door.....doz. pairs.				Bronze, Genuine.....				NAIL PULLERS.			
ESCUTCHEONS.				Stearns, 4-inch.....				Shutter, porcelain, F. & L.				German and American.....			
Discount 50 and 10 per cent., new list				5-inch.....				No. 0.....per gross				NAIL SETS.			
ESCUTCHEON PINS.				Zenith.....				White door knobs.....per doz.				Square, round and octagon,			
Iron, discount 40 per cent.				Lace's covered—				HAY KNIVES.				per gross.....			
FACTORY MILK CANS.				No. 11, 5-foot run.....				Net prices.				Diamond.....			
Discount off revised list, 40 per cent.				No. 11 1/2, 10-foot run.....				LAMP WICKS.				POULTRY NETTING.			
FILES AND RASPS.				No. 12, 10-foot run.....				Discount, 60 per cent.				2-in. Mesh, 19 w.g., dis. 60 per cent.			
Great Western.....70 and 10 per cent.				No. 14, 15-foot run.....				LADDERS, EXTENSION.				2-in. Mesh, 16 w.g. and heavier, 50 p.s.			
Arcade.....70 " 10 "				Steel, covered.....				Waggoner Extension Ladders, dis. 40 per cent.				OAKUM.			
Kearney & Foot.....70 " 10 "				" track, 1 x 3-16 in(100 ft).....				LANTERNS.				U. S. Navy.....per 100 lb.			
Disston's.....70 " 10 "				" " 1 1/2 x 3-16 in(100 ft).....				Cold Blast.....per doz.				Plumbers.....			
American.....70 " 10 "				HARVEST TOOLS.				No. 3, "Wright's".....per doz.				OILERS.			
J. Barton Smith.....70 " 10 "				Discount 60 per cent.				Ordinary, with O burner.....				McClary's Model galvanized			
McClellan.....70 " 10 "				HATCHETS.				Dashboard, cold blast.....				oil can, with pump, 5 gallon,			
Eagle.....70 " 10 "				Canadian, discount 40 to 42 1/2 per cent.				No. 0.....				per dozen.....			
Nicholson, 60 and 10 to 60, 10 and 5				Shingle, Red Ridge 1, per doz.....				Japanning, 50c. per doz. extra.				Davidson oilers, discount 40 per cent.			
Royal.....80				2, ".....				LEMON SQUEEZERS.				Zinc and tin, discount 50, 50 and 10 per cent.			
Globe.....70 to 75				Barrel, Underhill.....				Porcelain lined.....per doz.				Copper.....per doz.			
Black Diamond, 60 and 10 to 60, 10 and 5 per				HAT ENAMEL.				Galvanized.....				Brass.....			
cent.				Henderson & Potts' "Anchor Brand"				King, wood.....				Malleable, discount 25 per cent			
Jowitt's, English list, 25 to 27 1/2 per cent.				HINGES.				All glass.....				GALVANIZED PAILS.			
Nicholson File Co.'s "Simplicity" file handle,				Blind, Parker's, discount 60 per cent.				LAWN MOWERS FOR 1905.				Dufferin pattern pails, discount 47 1/2 per cent			
per gross 85c. to \$1.50				Heavy T and strap, 4-in., per lb.....				Woodyatt, 10 1/2-in., 14-in. cut				Flaring pattern, discount 47 1/2 per cent.			
GLASS.				12 in. up.....				Star, 9-in.....				Galvanized washtubs, discount 47 1/2 per cent			
Window. Box Price.				Spring, No. 20, per gro. pairs.....				Daisy, 8-in.....				PIECED WARE.			
Size United				Spring, Woodyatt pattern, per gro., No. 5,				Philadelphia, 7 1/2-in., ball bearing				Discount 40 per cent off list, June, 1899.			
Inches.				\$17.50; No. 10, \$18; No. 20, \$10.80; No.				Grass Boxes.....				10-qt. flaring sap buckets, discount 40 per cent			
Under 26.....				120, \$20; No. 51, \$10; No. 50, \$27.50.				King Edw'd, 12-in., 14-in. cut				6, 10 and 14-qt. flaring pails dis. 40 per cent.			
26 to 40.....				HOES.				Horse Lawn Mowers, "Special."				Creamer cans, discount 40 per cent.			
41 to 50.....				Garden, Mortar, etc., discount 60 per cent.				Discount, 50 per cent., with freight conces-				PICKS.			
51 to 60.....				Planter.....per doz.				sions in quantity shipments.				Per dozen.....			
61 to 70.....				Tinned case, 35 per cent.				Maxwell & Sons:				Picture Nails.			
71 to 80.....				HOLLOW WARE.				10 1/2-in. high wheel.....				Porcelain head.....per gross			
81 to 90.....				Books.				9-in.....				Brass head.....			
91 to 95.....				Cast Iron.				8-in.....				PICTURE WIRE.			
96 to 100.....				Bird cage.....per doz.				Discount 50 per cent.				Tin and gilt, discount 75 per cent.			
96 to 100.....								Canadian, 50 to 50 and 10 per cent.				PINE TAR.			
								Russell & Erwin.....per doz.				1 pint in tins.....per gross			
												American discount 50 per cent.			
												Wood, fancy Canadian or America			
												37 1/2			
												40 per cent			

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per doz.

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Orgestom's Swedish 3 50 10 00

Henckel's 7 50 20 00

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Discount 40 per cent.

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Iron Rivets, black and tinned, 60 and 10 p.

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Copper Rivets, with usual proportion burrs, 45 per cent.

Copper Burns only, discount 30 and 10 per cent.

Extras on Tinned or Coppered Rivets, 1-lb. packages 1c. per lb.; 1-lb. packages 2c. lb.

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Canadian, discount 35 to 37 1/2 per cent.

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Pure Manilla 0 4

"British" Manilla 0 1

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" 5-32 inch 0 25 0 27

" 1/2 inch 0 25 0 28

Russia Deep Sea 0 16

Jute 0 09

Lath Yarn, single 0 10

" double 0 10 1/2

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" 80 feet 0 80

" 72 feet 0 95

RULES.

Boxwood, discount 70 per cent.

Ivory, discount 20 to 25 per cent.

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" No. 50, nickel-plated, " 0 90

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" plated 5 50

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Emery (Burton's), 5 to 10 per cent. advance on list

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"Eureka" tinned steel, hooks " 8 00

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Hand, Disston's, discount 12 1/2 per cent

S. & D., discount 40 per cent.

Crosscut, Disston's, per foot 0 35 0 55

S. & D., discount 35 per cent. on Nos. 2 and 3.

Hack, complete, each 0 75 2 75

" frame only each 0 50 1 25

SASH WEIGHTS.

Sectional per 100 lb. 2 00 2 25

Solid 1 50 1 75

SASH CORD.

Per lb. 0 28 0 30

SAW SETS.

per doz.

Lincoln and Whiting 4 75

Hand Sets, Perfect 4 00

X-Cut Sets, " 7 50

SCALES.

Gurney Standard, 40 per cent.

Gurney Champion, 50 per cent.

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Weigh Beams, discount 35 per cent.

Champion Scales, discount 50 per cent.

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" Richelieu, discount 55 per cent.

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" Champion, discount 50 per cent.

" Weighbeams, discount 35 per cent.

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Common doors, 2 or 3 panel, walnut

stained, 4-in. style per doz. 6 50

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Common doors, 2 or 3 panel, in natural

colors, oil finish per doz. 8 75

3-in. style 20c. per dozen less.

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Wood, F. H., bright and steel, discount 87 1/2 per cent.

Wood, R. H., bright, dis. 82 1/2 per cent.

" F. H., brass, dis. 80 per cent.

" R. H., dis. 75 per cent.

" F. H., bronze, dis. 75 per cent.

" R. H., dis. 70 per cent.

Drive Screws, dis. 87 1/2 per cent.

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" iron 4 25 5 00

Set, case hardened, dis. 60 per cent.

Square Cap, dis. 50 and 5 per cent.

Hexagon Cap, dis. 45 per cent.

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Per doz. net 6 00 9 00

SCYTHE SNATHS.

Canadian, discount 40 per cent.

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Canadian, discount 45 per cent.

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" 18 x 30 1 00

" 18 x 36 1 40

SNAPS.

Harness, German, discount 25 per cent.

Look, Andrews' 4 50 11 50

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2-lb. or over 0 34

SQUARES.

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" No. 493 2 40 2 55

" No. 494 3 25 3 40

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Plain, discount 75 and 12 1/2 per cent. off revised list.

Retinned, discount 75 per cent. off revised list.

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Galvanized 8 00

Plain 2 80

Coopers, discount 45 per cent.

Poultry netting staples, discount 40 per cent.

American discount 25 per cent.

STONE.

Washita per lb. 0 28 0 60

Hindostan 0 06 0 07

" slip 0 09 0 13

Labrador 0 15

" Axe 0 30

Turkey 1 50

Arkansas 0 10

Water-of-Ayr 5 00

Scythe per gross 3 50 5 00

Grind, 40 to 200 lb., per ton 25 00

" under 40 lb., 28 00

" 200 lb. and over 31 00

STOVEPIPES.

5 and 6 inch, per 100 lengths 7 00

7 inch 7 50

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Carpet tacks, blued 80 and 15

" tinned 80 and 20

" (in kegs) 80

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" 4 weights 60

Swedes cut tacks, blued and tinned—

In bulk 80 and 10

In dozens 75

Swedes, upholsterers', bulk, 85, 12 1/2 and 12 1/2

bulk, blued and tinned 70

Swedes, gimp, blued, tinned and

japanned 75 and 12 1/2

Zinc tacks 35

Leather carpet tacks 55

Copper tacks 50

Copper nails 52 1/2

Trunk nails, black 65 and 5

Clout nails, tinned 65 and 10

Clout nails, blued 65 and 5

Chair nails 35

Patent brads 40

Fine finishing 10

Lining tacks, in papers 15

" in bulk 15

" solid heads, in bulk 75

Saddle nails, in papers 10

" in bulk 15

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" steel each 0 80 8 00

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Per doz. net 3 00 15 00

Claus, discount 35 per cent.

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Tin case and dairy, 75 to 75 and 10 per cent.

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TROWELS.

Disston's, discount 10 per cent.

German per doz. 4 75 6 00

S. & D., discount 35 per cent.

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Staging 0 27 0 35

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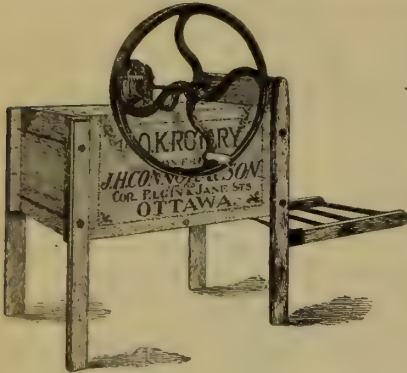
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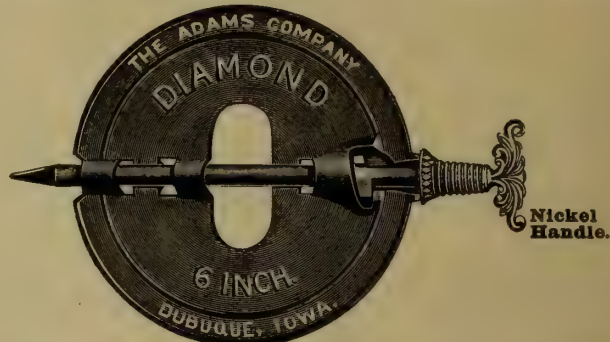
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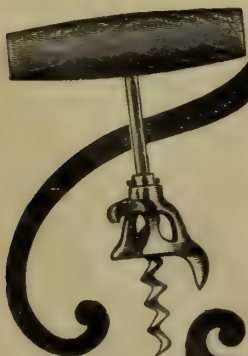
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A Merry Christmas
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VOL. XVI.

MONTREAL AND TORONTO, DECEMBER 31, 1904

NO. 53

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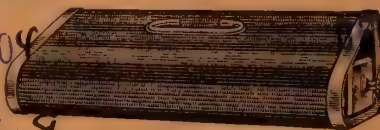
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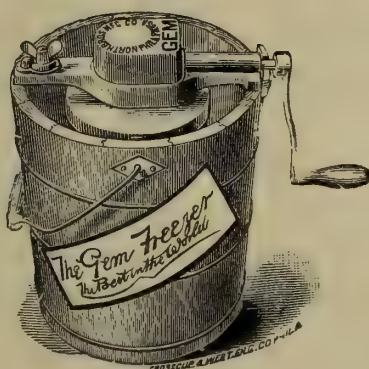
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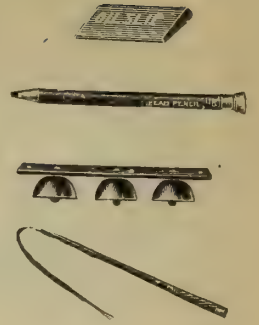
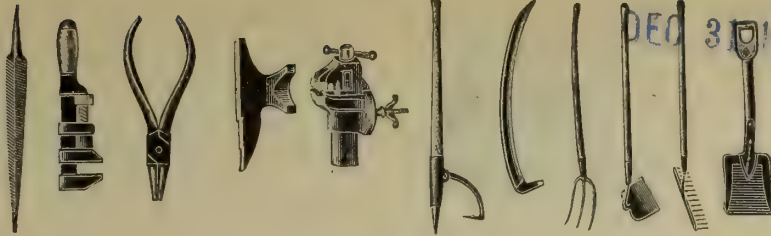
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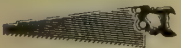
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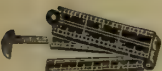
Mr. Cut Bodh 28

Page 19



and

To Mr. Kutter



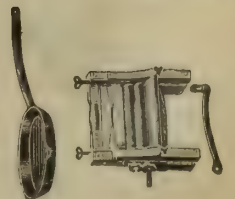
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Mr. Bodh 28
Page 19
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An' bait an' bait agin';

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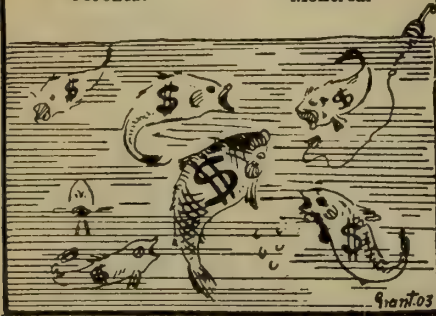
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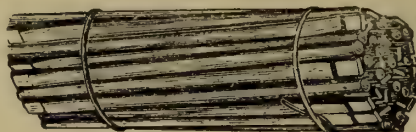
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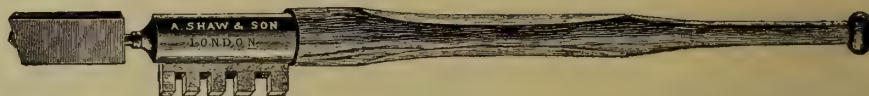
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Ahead of all others in quality and workmanship. If sparks of fine quality, set by experts, are what you require, buy Diamonds of A. Shaw & Son's make.

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CELEBRATED HEINISCH SHEARS

Tailors' Shears,
Trimmers' Shears,
Tinnners' Snips, etc.



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R. HEINISCH'S SONS CO.

NEW YORK OFFICE, 155 Chambers St.
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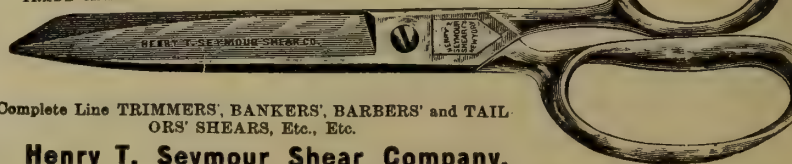
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Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



TRADE MARK

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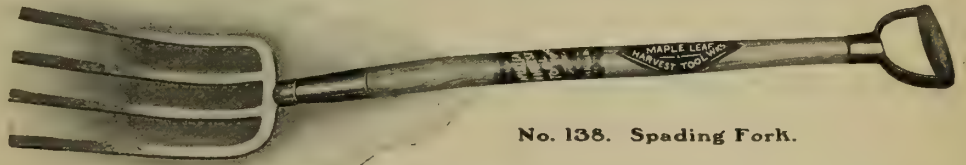
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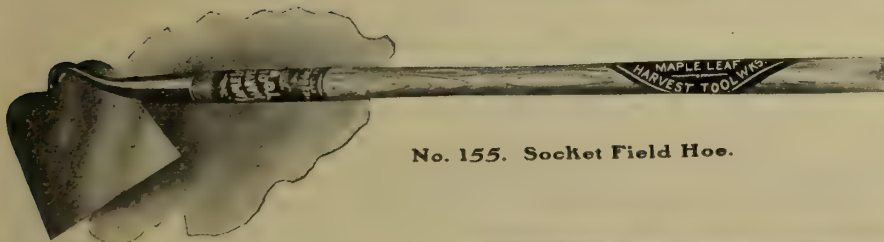
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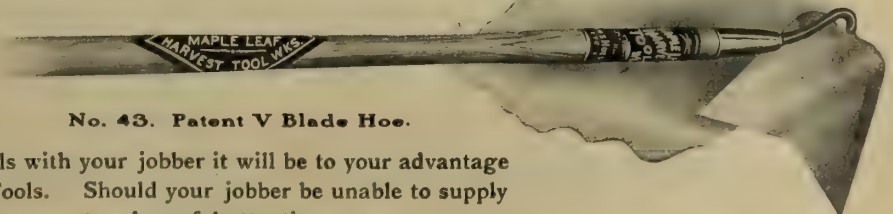
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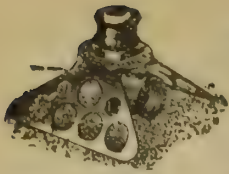


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TO THE HARDWARE TRADE—

When placing your order for harvest tools with your jobber it will be to your advantage to specify for the "Maple Leaf" Harvest Tools. Should your jobber be unable to supply them, send your order to us and it will receive prompt and careful attention.

The Maple Leaf Harvest Tool Co., Limited, Tillsonburg, Ont.



**"Pullman"
Lawn Sprinkler**

**IS YOUR
ORDER IN ?**

Send for Folder No.14.

PULLMAN MFG. CO.
Rochester, N. Y., U.S.A.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and
ELECTRO PLATE.**

Ask for our Catalogue and Quotations.

Don't Forget the Name. . .

NEWMAN'S INVINCIBLE FLOOR SPRINGS

Strong, Quick, Reliable, Effective.

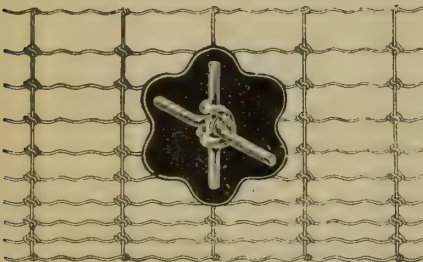
Will close a door against any pressure of wind.
Far ahead of ordinary door springs, pneumatic or
otherwise. Ask your wholesaler.

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**Happy New Year
to Our Many Friends.**

THE SUPERIOR MFG. CO.

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IDEAL FENCING

Is made of all No. 9 hard steel wire. It will not bank snow
nor harbor weeds or vermin.

The strongest and longest lasting fence made.

Write for catalogue of fencing and gates.

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A FULL LINE OF

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Steel Frame Support.

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FEATURES:**

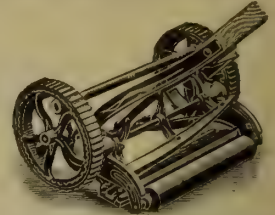
Improved Steel
Stand, Roller
Shafting, Crucible Steel Knives and
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Bearings, and Foot and Hand Lever Drive, and Detachable Driving
Link. Improved for season of 1904. Steel or Wood Frame as desired.

Lawn Mowers.

High and Low Wheels, from 12 in. to
20 in. widths. Cold Rolled Steel
Shafting, Crucible Steel Knives and
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If your Wholesale House does not offer you these articles

SEND DIRECT TO US.



MAXWELL MOWER

8-in. Low Wheel.

Wheelbarrows.

In Four
Different
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SPRINGS

FLAT—SPIRAL OR VOLUTE

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Factory equipped with the
latest improved machinery.

Make inquiries
Get our prices

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THOS. H. WYNN, - - HAMILTON

If **QUALITY** is what you want, buy

"Sword and Torch" Galvanized Sheets

If **PRICE** is main consideration, buy

"3 Castles and Key"

J. A. HENDERSON,

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Binder Twine

BLUE RIBBON, 650 ft. to the lb.

REDCAP, - 600 ft. to the lb.

TIGER, - - 550 ft. to the lb.

STANDARD, 500 ft. to the lb.

Still the Favorites of both FARMERS and DEALERS.

Nothing but Select Fibre Used.

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Our Twine is not only evenly spun, but is WELL BALLED.

This is very important, prevents tangling in Twine Box

Write for prices.

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MONTREAL.

Mills—MONTREAL and HALIFAX.

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**IS THE TIME TO PLACE YOUR SORTING UP ORDERS
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POCKET TRUE BRAND CUTLERY RAZORS
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BEST GOODS QUALITY GUARANTEED RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., **Montreal**



Did You Suggest to Him

that a "New Century" Washing Machine would be a most acceptable gift to his wife? If you didn't, you missed something good.

The "NEW CENTURY" Washing Machine

is a boon to all homes, rich or poor. The "New Century," more than any other, for it is unrivalled as an **Economizer of Fabric, Time and Strength.**

SEND FOR OUR CATALOGUE FOR A FULLER ACCOUNT OF IT.

THE DOWSWELL MANUFACTURING CO., Limited, - HAMILTON, ONT.

Season's Greetings

We thank our many friends and customers for the very liberal patronage accorded us during the past year, and desire to extend to each one our best wishes for a **Happy and Prosperous New Year.**

Kemp Manufacturing Co., - Toronto, Canada

1904

THE TURN OF THE YEAR

1905

JUST at the turn of the year is an admirable time for the business man to pause and scan the field thoughtfully. A look back over the experiences of 1904 will give him an idea of the foundations on which his trade will have to be built during 1905 and a look ahead into the coming year will show him what probable conditions he will have to face. Such a review of the field cannot but be beneficial.

On the whole the year just drawing to a close has been a satisfactory one, notwithstanding depressing conditions during the first few months. These extended their influence well on into the Summer. Fortunately good crops did much to restore confidence and trade strengthened very materially during the latter half of the year.

Without an exception all the firms interviewed by Hardware and Metal on the subject of prospects for 1905, were extremely optimistic. "Prospects are fair" was about the least encouraging remark while the saying, "The outlook is bright," was quite frequently heard. The following interviews with leading hardware men will give readers of Hardware and Metal an idea of past and future conditions in the trade.

Lewis Bros. & Co., Montreal.

Trade for the year past has been very satisfactory from all sections. There is no doubt that the general trade throughout the country depends on the farmer and the lumbering trade. As the harvests have been good and the lumbering business booming trade has been in a satisfactory condition, enabling prices to be well maintained. Present indications go to show that there will be no trouble in keeping them up to the present standard. Western trade was unusually good in all parts of the country and while the travelers have all done exceptionally well this year, they state that they are after more business in the year to come, and there is no doubt that this will be realized. Prospects for the next year are very bright, and the business has grown to such an extent that it is no longer possible to remain in the same quarters, but removal to new and commodious quarters is necessitated.

Thos. Robertson & Co. Montreal.

The year opened up poorly on account of the conditions. Railways refused to take freight for western points, which hampered business to a considerable extent. The late opening of navigation was another hindrance. As it was, the country merchant had to wait a month longer for his goods than he was accustomed to, and first orders were going out at a time when it was usual to be sending out second consignments. While the net result was less than that of a year ago, business pulled up very greatly towards the end of the year, and prospects for 1905 are particularly good. Judging from the present status of the iron and steel markets, and by advices from primary markets, 1905 is to be a good year for business. Prices are on a very firm standard and are well maintained. In Montreal there will be a big building boom. Last year a good many contemplated buildings were never started on account of the unsettled condition in labor circles, but if nothing unforeseen happens all the delayed buildings and a great deal more will be undertaken. If trade is in a settled condition when Spring arrives there will be great activity.

H. S. Howland, Sons & Co., Toronto.

Owing to the burning of their building and stock in the Toronto fire in the Spring, H. S. Howland, Sons & Co., Limited, are not in a position to make a comparative statement regarding trade this year and last. However, since getting fairly well settled in their new building on Front street, they have found business exceptionally brisk, much more so than last Fall. There has been a very ready sale of Christmas goods this Fall, and the good demand for all lines of Winter goods continued well on into last week, which is something unusual. As for the prospects for next year, they are very bright indeed.

Walter Grose, Montreal.

Mr. Grose is sole representative in Canada for the Nicholson File Co., and has a controlling interest in the Ontario Lantern & Lamp Co. For the former line the third year of business has just finished, and has seen a steady growth from the start. With the expansion in railroading and rolling stock that is proposed in this country

for next year, there will be a much larger demand than ever for files. In lanterns and incandescent lamps there has been a greater demand than ever before. Probably one of the reasons for the particular activity in lanterns is the low price, and another the expansion of the country. It is firmly believed that 1905 will be a prosperous year and the volume of trade will be larger than ever before, as the metal market is in a particularly good condition, and preparations are being made for a very large trade. Mr. Grose is very much pleased with the results of his steady advertising in Hardware and Metal, and considers it beyond any doubt the best advertising medium for the hardware people throughout the whole Dominion.

Consumers' Cordage Co., Ltd., Montreal.

Business for the year just closing has not been as satisfactory as that of 1903. The consumption of cordage was smaller than usual, and the importation from Great Britain showed an increase. The amount of binder twine consumed was a disappointment, as the crops in Ontario were not up to their usual standard. On account of the building of the Grand Trunk Pacific and the large amount of immigration to the country, 1905 should be an improvement on the year just past.

Wood, Vallance & Co.

In response to Hardware and Metal's inquiry regarding trade conditions during the past year, Mr. Eager, manager of the Toronto branch of Wood, Vallance & Co., of Hamilton, said: "During the early part of the year the volume of business done was about the same as the previous year, nor were prospects very bright for the remaining part of the year. Poor crops were predicted, and it was the opinion that the year would be a somewhat dull one. However, very many were agreeably surprised at the way things turned out during the year. Business during the latter part of the year has been very brisk indeed, and the volume of business done exceeds that of last year for the same time. Our firm have every reason to be satisfied with the outcome of the year's business.

"There is one thing we have learned, and that is that the condition of our market for next year depends on the United

States market to any great extent. We can now go on our way relying on conditions in Canada without being influenced as we used to by conditions in the States."

"What can be said about prospects for the coming year?"

"Well, we wouldn't like to prophesy, remembering the way predictions fell through this Summer. However, as far as we can see there is every prospect of a continuance of good times."

**The Thos. Davidson Mfg. Co., Ltd.,
Montreal.**

The conditions of trade for 1904 were generally satisfactory. Over-production is making itself felt slightly, one new concern in Montreal going to the wall. Prices of raw material are higher all round, which tends to steady prices, and in some cases call for an advance. The prospects for 1905 are fair, prices of produce in Ontario and Quebec being low, and lumber in New Brunswick not satisfactory. The Northwest is the steadying factor with its rush of immigration.

Baines & Peekover, Toronto.

Baines & Peekover, dealers in heavy hardware and iron and steel, say that in their lines the past year has not been so good as the year before. A slight falling off was noticed during the first of the year, but during the Summer this slackness was perceptible to a considerable degree.

"During the latter part of the Fall, however," said Mr. Peekover, "things have picked up wonderfully, and there is every prospect for bright times during the coming year."

"Bar iron has been steadily advancing on the American market, but in spite of this fact there has been no advance made in bolts, nuts, screws, etc. Buyers of these lines will not accept the fact that iron has made such advances. Although no advance has taken place so far there is almost certain to be one in bolts, nuts, screws, etc., early in the coming year."

Kennedy Hardware Co., Toronto.

The Kennedy Hardware Co., Limited, have found a steady increase in business during the past year. Each month has seen the volume of trade increasing.

"However," said Mr. Smith, "ours is a new house, and we are building up our business each month; and thus our business is hardly to be taken as a criterion of the state of trade in general. The volume of trade this Fall has been much greater with us than last Fall. Trade has kept up well this year, and it was not until about the middle of the week before Christmas that the usual Christmas slackness set

in. This slackness will probably continue on into January, when things will begin to pick up again."

"What are the prospects for next year?"

"Well, trade appears to be in a very healthy condition, and prospects are good. There is a feeling of prosperity throughout the country, and there have been very few failures of any consequence."

"Has there been any very special feature about the trade during the past year?"

"No! There has been nothing much out of the ordinary; things have followed their usual course."

Lewis Bros. & Co., Toronto.

M. Morelle, manager of the Toronto branch of Lewis Bros. & Co., Montreal, reports that the general run of business this year is ahead of last year. This is especially the case with the Fall and Christmas trade.

"Business has continued very brisk, much brisker than last year, right up to the middle of the week before Christmas week, when it began to fall off, as usual. There has been nothing very unusual in trade conditions during the past year. The prospects for next year are good."

Seybold & Sons Co., Montreal.

During the past year trade has been good. More trade was sought for and consequently more business was done. Next year, from present indications, looks better than last, which, however dull at first, was unusually brisk during the last few months.

A Leading Montreal Firm.

Last Winter the weather conditions in January, February and March, were such as to have a very detrimental effect on trade. The first of April it improved, however, and a large volume of business has been done since then, being particularly good the last quarter of the year. Everything points to 1905 as a year of great prosperity in the hardware business. There is no doubt whatever that prices will tend upwards, and the expansion which is likely to take place in Canada will prove of great benefit to the hardware trade. The outlook for 1905 is looked forward to with much greater anticipation than was the year of 1904.

Amoit, Lecours & Lariviere, Montreal.

Expansion has been the watchword of this firm during the last year, one of the results of which was the opening up of a down town store, primarily intended for builders', hardware and plumbing supplies. The move was such a success that preparations are being made to extend this store still further and use it altogether for wholesale

business, and the retail business will be carried on in the uptown store. Business has been better during the past year than ever before, and the greatest confidence is expressed for next year's business.

THE IRON INDUSTRY IN 1904.

ON the subject of the iron industry during the past year Mr. Geo. E. Drummond, of the firm of Drummond & McColl, Montreal, and ex-president of the Canadian Manufacturers' Association, gave the following to a representative of Hardware and Metal:

As a direct effect of advancing prices of iron and steel products in the United States and the temporary lessening of competition from that quarter, the conditions in iron trade circles in Canada have improved very considerably, particularly within the past thirty days. The demand for pig iron is quite active, and the same applies to most forms of heavy steel and iron. Prices are advancing steadily from the unprofitable basis that they have been on since the commencement of the present year. Iron ore and coke costs are considerably higher than they have been, and the whole outlook is in the direction of still higher figures for raw material and finished products in the coming year. Some of the best authorities on the American side predict that before the close of 1905 prices and iron and steel products will be as high as they were three or four years ago.

An important factor in the improvement in Canada has been the better conditions prevailing at Sault Ste. Marie and at Sydney, where, through the partial readjustment of the tariff, the works are enabled to produce steel rails, wire rods, and other products of finished material, on a reasonably profitable basis. When the complete revision of tariff is arranged there is no doubt that the conditions not only at the Soo and Sydney, but at all the iron and steel works

**WIRE NAILS
TACKS
WIRE**

Prompt Shipment

**The ONTARIO TACK CO.
Limited.
HAMILTON, ONT.**

throughout Canada will be very much improved.

With regard to the British market, it is in a somewhat peculiar position. Local trade over there is at present quiet, but the stocks are low, and the advancing prices in the American market (and pig iron has gone up \$3 to \$4 per ton in that market within the past sixty to ninety days) have stimulated wonderfully the ideas of British producers. This is evidenced by the fact in spite of the present quietness in the local trade, Middlesboro warrants have advanced practically 5s per ton in the last few weeks, and manufactured steel from 2s 6d to 5s per ton.

It is said that to-day the total stocks of pig iron in Scotland and England do not exceed 300,000 tons, and that the same tonnage would about cover the stocks on hand in the United States. If this be true one can readily understand that it would require but a moderate improvement in the demand for railway, ship building material, structural work, etc., to lower the available stocks, and force the blast furnaces to their fullest capacity to keep pace with orders.

In Great Britain the makers of steel for ship building work have, I learn, booked excellent orders for Spring delivery, and the outlook in that section of the trade is quite promising.

There is one important feature that will have its affect upon the course of prices during the coming year in the Canadian trade, viz., that the stock of pig iron and finished material in consumers' yards and warehouses is about as low as can possibly be. With the improvement in trade which is bound to come, by reason of the great public works that are about to proceed in Canada, including the Grand Trunk Pacific, there seems to me no doubt as to the bright outlook in store for the Canadian iron and steel industry.

MR. GLADSTONE'S EXPERIENCE.

IT is remarkable how many men of any financial influence or standing in this country have been more or less affected in their position and prospects by the development of the coal and iron industries. John Morley's "Life of Gladstone" shows that the great Liberal statesman was one of the many who have been prejudicially affected by such an outlook. Sir Stephen Glynne, Gladstone's brother-in-law, had in Staffordshire a farm of less than 100 acres of land, for which, in 1835, he refused £35,000, but which he thought he would himself develop. Gladstone had



Paris Green Profit

Paris Green *profit* depends directly upon Paris Green *quality*.

BERGER'S PARIS GREEN

is the kind you should sell because it is the recognized standard of Paris Green excellence.

It is strictly pure—made and kept at government standard.
It is sure death to bugs—kills every time.
It is the most satisfactory Paris Green sold to-day.
It profits the dealer most and protects the farmer's crop always.

Our method of bringing in Paris Green trade is a sure winner Write to-day for prices and full particulars.

 **THE SHERWIN-WILLIAMS CO.**
Canadian Headquarters & Plant: 639 Centre St., Montreal. Warehouses: 86 York St., Toronto, 147 Bannatyne St., E., Winnipeg.



an interest in this small property through his wife. A manager was engaged who, according to Morley, "rapidly extended operations, setting up furnaces, forges, rolling mills, and all the machinery for producing tools and hardware (sic.), for which he foresaw a roaring foreign market." Large capital was raised solely on the security of the Hawarden property and credit. The company, in 1845, became hopelessly insolvent, and it was decided to wind up. In 1849, Mr. Gladstone bought the concern on behalf of himself and his two brothers-in-law. The burden then entailed on Hawarden was then over £250,000, leaving Glynne with no margin to live on. For several years Mr. Gladstone worked hard at clearing up this entanglement, which he ultimately succeeded in unravelling, but its influence was felt for many years afterwards, and crippled the resources of both Mr. Gladstone and his maternal relatives. In

after years this experience was unquestionably useful to Gladstone in giving him a knowledge of the uncertainties and difficulties of carrying on both coal mines and ironworks. —Iron and Coal Trades Review.

Spain produced 175,109 tons of lead in 1903, exceeding the output of all other countries except the United States. Mexico is the third largest producer, and Australia comes fourth in order.

Pennsylvania which makes more than half the iron used in the United States, produces less than 2 per cent. of the iron ore mined. Ohio, which comes next to Pennsylvania as an iron-maker, mines less than 0.1 per cent. of the total. In both cases the ore is brought to the fuel; and this is the policy in this country. Only in Alabama are the ore and fuel found together.

Trade Conditions in Birmingham

By H. B.

Birmingham, Dec. 15, 1904.

SELDOM has there been a year which drew to its close amidst less regrets than 1904. Generally speaking it has been a disastrous time for the Old Country, commercially, and few can lay the flattering unction to their souls that they are better off in worldly wealth for the year that is passing away. On all hands the problem of the unemployed is taxing municipal communities and the pockets of philanthropists, while it is only here and there that the annual balance sheet of a manufacturing concern shows a satisfactory state of things as compared with previous annual statements.

* * *

Yet current returns both in imports and exports display a material expansion, and although this increase in exports is chiefly due to a larger volume of trade in industries associated with parts of the country removed from the district that looks to Birmingham as its centre, there is every prospect that the improvement in trade unerringly registered by the official returns will presently affect the Midlands. The engineering trades of the district have indeed already received some stimulus. This is to be traced more particularly to the improving condition of commercial affairs in South Africa, and also to large orders for constructive iron work and electric fittings recently received from Japan. To Japan also must be credited much of the activity that exists in the woollen industries of the north of England, which has helped to swell the export returns, very large contracts having been executed in connection with the Winter clothing of the Manchurian army and in blankets.

* * *

The recent unaccountable rise in copper led to considerable speculation and gave an impetus to the brass trade, but the sudden slump in copper has set matters back, and many manufacturing firms find themselves with contracts signed for, which they could now well dispense with.

* * *

The break in copper found some reflection in iron and steel which has of late been hardening and maintaining ad-

HAS A "GRIP" ON THE TRADE. IVER JOHNSON Revolver Grip.



Progressive dealers instantly recognized its value—the demand was spontaneous. As the result of extensive advertising there is already a large demand for this revolver.

Have you placed your order?

"DON'T CARRY IT" — "WILL SEND AND GET IT"—

"INTEND TO HAVE IT"



are signs that —————> point to the door of your competitor, who, being alert and keen, realizes that "New Things" impart life and activity to his business and who instantly recognizes the practicability and selling virtues of the

IVER JOHNSON Revolver Grip

Send for new catalogue just issued—a work of art—mailed free upon application.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS., U.S.A.

vances with a steady persistence that is perhaps the most hopeful sign for the Midlands at the present moment. For in hardware centres "Iron is king." And in this connection there is to be observed, and especially during the past fortnight, that a far more optimistic feeling is exhibiting itself in regard to the new year. Although, for example, business is slack on the iron market owing to the approach of Christmas, specifications were given out at this week's meeting with considerable freedom, for execution before the end of the year. Enhanced prices are also maintained. Hoop and thin strip makers have declared an advance of 2s 6d per ton, making hoops £6 12s 6d delivered in the district. Common bars of best unmarked brands are also in demand at £6 to £6 2s 6d according to method of delivery. Pig iron quotations are stationary. Wolverhampton is looking forward to the new year for a much needed betterment in the demand for its local manufacturers. There is no falling off in the number of indents received from abroad, but quantities are relatively small. The Canadian requirements are

not large; South African demands are improving and the South American trade shows no falling off. Electrical engineers and makers of constructive iron-work are fairly engaged, and there is a good demand for ships cables and other requisites for shipping. Admiralty contracts are keeping steel tube works well employed and machinists' tools are in request.

* * *

Most of the balance sheets of manufacturing limited liability companies, show a falling off in profits for the past year, and taking trade reports generally it may be assumed the commercial world has passed in 1904 through a time of crisis. But credit is wonderfully well maintained and the outlook is undoubtedly more promising than it has been for some months past. Business men generally will hail the advent of 1905 with a feeling of relief. Meantime from this side of the water may I, on behalf of workers in England's hardware district, wish all readers of Hardware and Metal a merry Christmas and a more prosperous new year than the one that is now so rapidly passing away.

H. S. HOWLAND, SONS & CO. LIMITED

HARDWARE MERCHANTS

138-140 WEST FRONT STREET, TORONTO

Wholesale
onlyOnly
Wholesale

BOYS' WOOD SLEDS



No.	Length	Width
1	28 inch	10 inch
2	33 "	10 "
3	37 "	10 "



"VICTOR"	Length	Width
	33 inch	10½ inch



"SPORT"	Length	Width
	40 inch	10½ inch



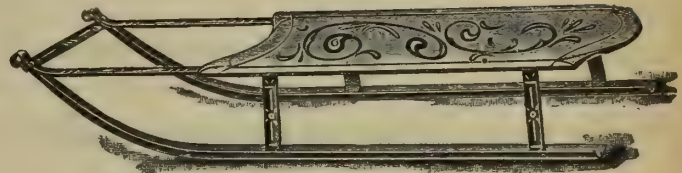
"RACE"	Length	Width
	44 inch	15 inch

"STAR" STEEL SLEDS AND COASTERS

AMERICAN



No.	Length	Width	Height	Knees
00	27 inch	9 inch	6 inch	2



No.	Length	Width	Height	Knees
11	32 inch	9 inch	4½ inch	2



No.	Length	Width	Height
1	34 inch	10½ inch	4¾ inch
2	37 "	11½ "	4½ "
4	43 "	12 "	4½ "



No.	Length	Width	Height
202	44 inch	11 inch	5½ inch



No.	Length	Width	Height	Knees
0	28 inch	10½ inch	7 inch	2
10	30 "	12 "	7½ "	2
20	33 "	12 "	7½ "	2
30	36 "	12 "	7½ "	3



No.	Length	Width	Height	Knees
110	30 inch	12 inch	7½ inch	2
120	33 "	12 "	7½ "	2

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

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Factory: Dufferin Street, Toronto, Ont.

Our prices are right.



Gillett's Lye

Extends to the thousands of its
salesmen among the hardware
trade of Canada, its

Best Wishes
for the New Year

E. W. GILLETT COMPANY LIMITED
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Established 1842.

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Porcelain Enamel Sinks,

Porcelain Enamel Lavatories,

Porcelain Enamel Lipped and Plain Urinals,

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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Dec. 30, 1904.

ADVANCES in copper are likely to affect plumbing supplies considerably and on all brass goods, manufacturers have withdrawn their prices and further quotations will be issued at advanced rates. The heating season is practically over, but stray

jobs are still being done, yielding a fair demand in these goods. In plumbing supplies the output is unusually large for this season of the year. Scarcely any falling off from previous activity has been felt. Prices remain unchanged.

Range Boilers—Throughout the entire year there is a demand for these which is fairly brisk at the present time. Quotations are as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—An active demand continues and although it was said that there would be an advance shortly, such is not likely to take place soon, owing to the fact that pig lead is quoted lower. Discount 30 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—Seldom has the demand kept up as well for these goods as at present, being reported larger than that of other years. Our quotations are as follows: Soil pipe, standard, 50 per cent. and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—In iron pipe fittings there is considerable movement and a large amount of stock moving. The market is strong with prices unchanged. Discounts on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—As the price of raw material for making iron pipe has advanced, there is no doubt but this will be quoted higher soon and it has already been mentioned that the jobbers are quoting rather low compared with the manufacturers present quotations. We quote: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8

in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, Dec. 30, 1904

THE amount of business accomplished in the year 1904 has never been equalled in any previous year. On every hand is noted the excellent "times," which the country is enjoying. These "good times" were the direct cause of the increase in the building trade this season and they in their turn caused the exceptionally heavy demand for heating and plumbing goods. Never before was witnessed such a busy season among the contractors throughout the entire Dominion. The increase in the number of buildings erected this year over last has been enormous. The dwellings of to-day are relying almost entirely on the methods of steam, hot water and hot air for heating purposes. More baths are also being installed. The season for this work opened up very late this year owing to the severe winter and many of the jobbers feared that the amount of business transacted this year would not come up to that of last year. However, the season has sped along, everybody has been busy—extremely busy—and the time has now arrived for looking back over the "sales journal" with the result that the majority of wholesale jobbers find that their increase has been from twenty to thirty per cent. Another reason for the increase is that a number of towns, especially in New Ontario and Manitoba, have installed waterworks systems during the last summer. This means that a large amount of iron pipe, iron pipe fittings, baths, sinks, etc., would be used.

Trade during the last week has been quiet and the general reason given is that the public are busily engaged purchasing holiday articles and gifts. The outlook is for a quiet trade for some time.

Lead Pipe—Trade conditions continue unchanged. Demand is fair, and prices continue unchanged. We quote: Lead, 7c; lead waste pipe, 8c; discount 30 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—A fair demand is current. Prices are firm and unchanged. We quote nominally: Malleable fittings 20 per cent. for American and 35 per cent. for Canadian; cast iron (standard), bushings, 65 per cent.; headers, 60 per cent.; flanged unions, lipped, 60 per cent.; malleable bushings,

57 1-2 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—Trade is quiet. The discount continues unchanged at 15 per cent.

Galvanized Iron Range Boilers—Trade is quieter. Prices are firm and continue unchanged. Our quotations are: 12 gallon capacity, standard, \$4.50; extra heavy, \$6.50; 18 gallon, standard, \$4.75; extra heavy, \$6.75; 24 gallons, standard, \$4.75; extra heavy, \$6.75; 30 gallons, standard, \$5; extra heavy, \$7.50; 35 gallons, standard, \$5; extra heavy, \$8.50; 40 gallons, standard, \$7; extra heavy, \$9.50; 52 gallons, standard, \$11; extra heavy, \$14; 66 gallons, standard, \$18; extra heavy, \$20; 82 gallons, standard, \$21; extra heavy, \$24; 100 gallons, standard, \$29; extra heavy, \$34; 120 gallons, standard, \$34; extra heavy, \$40; 144 gallons, standard, \$47; extra heavy, \$55.

Iron Pipe—Trade is fair. The market is steady. Prices continue unchanged. Our quotations are: Black, 1-4 inch, \$2.04; 3-8 inch, \$2.06; 1-2 inch, \$2.30; 3-4 inch, \$2.88; 1 inch, \$4.13; 1 1-4 inch, \$5.63; 1 1-2 inch, \$6.75; 2 inch, \$9. Galvanized, 1-4 inch, \$2.86; 3-8 inch, \$2.89; 1-2 inch, \$3.15; 3-4 inch, \$4.03; 1 inch, \$5.78; 1 1-4 inch, \$7.88; 1 1-2 inch, \$9.45; 2 inch \$12.60.

Solder—Market strong and prices firm. We quote: Bar solder half and half, guaranteed, is quoted at 17 3-4c; wiping solder at 15 1-2c, and refined 16 1-4c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 5 1-2 feet, 21-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 21-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D A quality, \$5.20; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

Public Baths.

CONSIDERABLE attention is being given by city authorities and generously disposed citizens throughout the country to the provision of public baths in sections where there is a congestion of population of a kind that do not provide convenient bathing facilities in their homes, says the Metal Worker. This is undoubtedly a step in the right direction, but at the same time some intelligent consideration should be exercised before the type of bath to be provided is decided upon. There is a considerable difference of opinion, for instance, as to the desirability of the large swimming pool type of bath as compared with the individual shower bath, and the subject is now a matter of discussion in more than one quarter. Wherever the public bath is used promiscuously by the class of people who most need it the possibility of contamination or the spread of some diseases is one that must not be overlooked. At the present time New York City is contemplating building a public

bath at a cost of a quarter of a million of dollars, a feature of which will be a large swimming pool. There are those who are opposed to this type of public bath because of the fact that the water must be heated, requiring an expensive plant, and must be frequently changed to avoid contamination. The advocates of the individual shower bath point out that the water used by the bather comes in contact with no other person than his own, and whatever may be his physical condition there is no danger to others who may use the bath immediately after. From a purely ablutionary point of view, both for invigoration to the system and for cleanliness, the shower bath has its advantages, while, on the other hand, some pleasure is derived from a swim in a large pool, and doubtless with the multitude the swimming pool would be the more popular bath of the two. As these public baths are provided in the interest of public health, it is desirable that only such baths shall be provided as are best calculated to conserve the general health of the community. Where the swimming pool type of bath is provided care should be taken to equip the bath with suitable cuspidors and with ample facilities for heating water sufficiently and changing it frequently. Then much of the objection that might be reasonably raised to the pool bath is reduced, if not entirely removed.

The Supply of Baths.

REPLYING to the statement made by a jobber in plumbing supplies in the last number of Hardware and Metal, to the effect that the supply of enamel baths is inadequate, Mr. H. T. Bush, president and manager of the Standard Ideal Sanitary Co., Limited, Port Hope, writes:

"It is quite evident to us that this gentleman has not been properly informed as to our increased facilities, that is, practically the doubling of our capacity and factories. Our company believe that we are in a position to take care of the business in Canada with reasonable promptness, and to substantiate this in a practical manner, we should be pleased indeed to receive an order from this gentleman for 8 or 10 carloads. This would demonstrate to him that we not only have the facilities for taking care of his business, but that we actually carry the goods in stock ready for prompt shipment.

Building Notes.

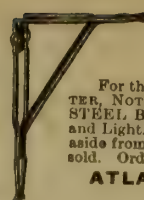
The Roman Catholics of Esterhazy, Assiniboia, are proposing to erect a new church.

Tenders are being invited for the construction of bridges over McCallum Creek, St. Marys, N.S., and over the Shediac River in Moncton parish in the same province.

Building permits to the value of \$233,609 were issued during the month of November in Montreal.

The contract for the erection of the new lift lock at Kirkfield, on the Trent canal, has been awarded to the Dominion Bridge Co., of Montreal.

The First Swedish Lutheran Church of Vancouver, has decided to erect a new building.



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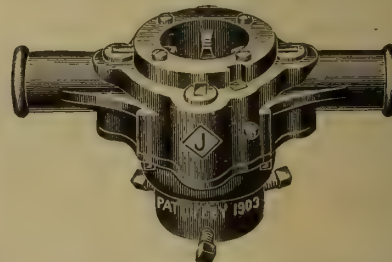
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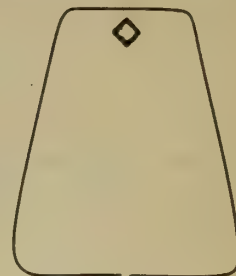


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NO. 233.—WILCOX TACKLE-BLOCK WIRE STRETCHER

A WHOLESALE HARDWARE FIRM'S JUBILEE

Caverhill, Learmont & Co. Celebrate their 50th Birthday by a Dinner to the Employees.

A NY firm would have great reason for pride if, after fifty years of existence, it could make the showing that did Caverhill, Learmont & Co., Montreal, on Wednesday evening last week at their annual dinner to their employees, in commemoration of the fiftieth anniversary of the founding of the firm of Crathern & Caverhill, as the company was styled at its inception in 1854.

Some firms might boast a larger corps of employees, but it would be hard indeed to find a group of men, old and young, expressing in word and action the same enthusiastic devotion to, and the same intelligent interest in, their employers welfare that was manifested around the festive board on Wednesday evening. Practically every member of the concern, from the members of the firm to the youngest office boys were present, as were also many former employees and friends of the company.

The chairman of the evening was J. B. Learmont, with George Caverhill and T. H. Newman as vice-chairmen. To the right of Chairman Learmont, was the guest of the evening, James Crathern, one of the founders of the concern, and now one of the foremost financiers of Montreal. Other guests to the right of the chairman were: Wm. J. Learmont, Edward Holton, ex-M.P., H. H. Learmont, W. L. Chipehase, Alex. Gibb, David Lewis and Wm. Smail. To the left sat Dr. Hutchison, A. A. Brown, John C. Newman, Henry Newman, Wm. Percival, C. F. Bennett, and A. Macfarlane. Other guests were scattered throughout the room, the entire arrangement being such as to develop the best possible spirit of fellowship and good cheer.

After a menu of surpassing excellence had been given attention, Chairman Learmont, in a few warm words, expressing appreciation of the work done by the secretary, J. W. Richardson called upon the latter to read the regrets received. Such was the desire of each employee of the firm to be present at the dinner that the only absentees were those who could not possibly be present. The notes from these gentlemen were full of sadness and longing.

The following letter was read from one sorrowing traveler compelled to be an absentee:

"Sunset Town," Dec. 21, 1904.

Messrs. Caverhill, Learmont & Co.

Gentlemen,—I hope I am not too late in sending you my photo for your celebration "Jubilee Group of Travelers."

You will, no doubt, wonder why I am minus my coat and vest; in explanation I beg to say that I

have got through discussing with one of my customers the barbed wire and wire nail situation, and as it grew too hot for me off went part of my garments. I was strongly advised by the hardware trade to send you the snapshot as I am assured it is the best photo ever taken of me.

I am very sorry I will not be able to come to business to-day as I will be obliged to remain at home all day getting my boiled shirt ironed and my Sunday pants pressed ready for the banquet to-night. Look out for me at your dinner.

Yours, I'm a whirlwind,
"PACE MAKER."

Chairman Learmont then proposed the toast of "The King" and "The Governor-General," both of which were responded to with musical honors.



The absent "Pace Maker."

The third toast to "Mr. James Crathern," was received with tumultuous enthusiasm, evidencing the esteem in which Mr. Crathern is still held by those connected with the company. In proposing the toast Chairman Learmont stated his conviction that much of the prestige and success of Caverhill, Learmont & Co. could be credited to the wisdom, energy and broad honorable business principles that have been introduced by its founders, and to their care in training up an intelligent loyal staff of employees.

MR. JAMES CRATHERN.

Mr. Crathern in responding expressed his keen sense of pleasure and pride at

being present at such a gathering, representative of the firm which he felt himself to be the father of. He had never lost his interest nor his pride in the concern. When he was connected with it he had striven to make it worthy of the respect and confidence of its customers, and he was glad to know it still retained, not only this confidence but also the respect and good-will of all its employees. Mr. Crathern paid a feeling tribute to those with whom he had been associated in the early years of the firm's history, and to many of the employees which had so faithfully served the concern in those days.

After an interesting programme of music, Mr. Crathern proposed the toast of "Caverhill, Learmont & Co.," coupling with it the names of J. B. Learmont, Geo. Caverhill and T. H. Newman, the members of the firm.

MR. J. B. LEARMONT.

Mr. Learmont after a few words of appreciation of the hearty way in which this toast had been received by all, extended a welcome on behalf of the firm. It was a pleasure to him to be present and extend greetings to practically all members of the staff, and to especially honor their friend and former chief, James Crathern.

In reviewing the fifty years that had passed, Mr. Learmont paid a warm tribute to Mr. Patton, a loved and honored member of the staff for many years. In passing he commented on the remarkable development of commerce in Canada since the firm was organized. In the year preceding the arrival of the steamship Genova of 350 tons, the pioneers of Canada's steamship service, was considered such an event that a school holiday was proclaimed and a banquet held to commemorate the event. In 1855 the C.P.R. had opened its line as far as Brockville, the following year as far as Toronto. The telephone and the use of electricity were also part of the fifty years' history of progress since 1854. The cable had superceded the slow English mail boats for important news. Fifty years ago warehouses were heated by box stoves imported by sailing vessels, while ships were unloaded and goods hoisted in warehouses by hand.

"I think," continued Mr. Learmont, "I may allude to the founders of the firm of Crathern & Caverhill. The senior member of that firm, James Crathern, is with us to-night, and I feel we can allude to Mr. Crathern as an example of integrity, rare business ability, sound judgement, untiring industry, great energy and perseverance. That Mr. Crathern is a successful man we all acknowledge

and our wishes are that he may be spared many years to enjoy in health and happiness the high and worthy position to which he has attained in the confidence and esteem of his friends and fellow-citizens.

"There are not many present who remember John Caverhill. I have that pleasure. Those who knew John Caverhill will remember him as a man of fine presence and of varied gifts, penetrating and incisive in manner. Especially was he so when interrogating anyone. A thorough man of business, one who mastered details on any subject he undertook and although I was young I was impressed by his reserved force of character and his power of self-control.

"Thos. Caverhill I knew much better. I saw more of him. A man of great business grasp and like his brother, John Caverhill, possessing force of character, blessed with originality and resource, tactful and witty, outspoken in manner, opposed to shams. Add to these a warm hearted, true friend.

"You will pardon me if I refer to a personal matter. I can remember on one occasion while Mr. Crathern was absent in England. One or two business cases developed unfavorable aspects. Although many years have passed I can remember asking Mr. Caverhill's advice, which was my privilege and duty.

"He looked upon the matters referred to in a commonsense business way. After going over details and contingencies he finally said in substance, as follows: 'Look at all points involved carefully, use your best judgment and when you have done so, act, do the best you can—and whatever may be the result, I will stand at your back.' I may say the matters referred to turned out satisfactorily for all concerned. Mr. Caverhill's kindly, yet decided, manner I can never forget.

"In this connection, speaking of the latter gentleman suggests the name of our late friend and partner, Frank Caverhill—a man able and honorable, kind and affectionate in disposition, of gentle, manly instincts and generous impulses. He died on May 21, 1899, much regretted by all who knew him.

"Mr. Frank Caverhill had been Lieut.-Col. of the Royal Scots. He had retired from the regiment some time previous, retaining his rank. To his old regiment he was much attached. As a mark of esteem he was accorded a military funeral which was attended by the military and a large concourse of friends and citizens.

"For many years past the members of our staff have at their own expense held an annual dinner. The members of our firm gladly embrace this special occasion to show their appreciation of these friendly and successful efforts of the staff in fostering and maintaining a healthy esprit de corps among the employees, by inviting you to honor us with your present this evening, at what we may call 'a friendly hardware gathering with a few friends,' and we are gratified that our invitation has been so cheerfully and heartily accepted.

"We much regret that some of the

staff owing to distance from Montreal and other unavoidable causes are unable to be with us. Although absent they are not forgotten by us. It is gratifying to notice what a number of those present have been identified with us for years; many of them have grown up with the business and are still connected with us."

MR. GEO. CAVERHILL.

Mr. Caverhill, as he had sat looking around the room, had found especial pleasure in realizing how many of those present were old trusted employees of the firm. As he had thought of them all scenes of former days had formed a kaleidoscopic picture in his mind,—if they were all gathered in groups, in cosy corners, some amusing stories would undoubtedly be told. He could remember when one morning in '77 he first entered the firm and was given as his first duty the job of carrying an eight gallon tinned round pot to another distant store to exchange for a twelve gallon pot, the intention of the order undoubtedly being to "take it out of him" and let him see what real work was.

He had always felt he had missed one of the pleasures of the hardware business in that he had never been put "on the road," where he might have, like the other travelers, a really enjoyable time. ("Oh, Oh," in chorus from the travelers.)

He was proud of the firm. It was no boast to say that it was in the front rank. Its prestige was due, not to the members of the firm only, but to the co-operation of a loyal, intelligent staff with the firm. They wanted only men who could be trusted, who believed in the firm and its goods. He always felt glad to note that so many of their former employees had risen to places of honor and wide usefulness. He often thought of what the present employees might be some day in the future; some would leave; some would stay; but he was confident that the firm of Caverhill, Learmont & Co. would, like the brook, go on, if not forever, yet for many years to come.

MR. T. H. NEWMAN.

Mr. Newman credited much of the success of the concern to Mr. Crathern, under whom he had himself, as had many others, got his early experience and education in business. They honored their former chief for his integrity, honorable principles, indefatigable energy, and wide grasp of commerce. When Mr. Newman joined the concern it was just starting to expand from one of small proportions to one of considerable magnitude. Since then its progress had been steady until now the firm was held in respect from the Klondyke to the Atlantic Ocean. With a continuance of strict integrity, honest dealing and promptness of filling orders, this onward progress would not fail to continue.

OUR GUESTS.

The toast, "Our Guests," was next proposed by the chairman, who coupled with it the names of C. F. Bennett, of the Stanley Works, New Britain, Conn.; Dr. Hutchison, A. A. Brown, of the McClary Mfg. Co.; C. E. Hanna, of the Dominion Cotton Co.; Wm. Percival, Edward Holton, ex-M.P.

Mr. Bennett felt it a privilege to meet in a social way the employers and employees of a company his firm had such large and pleasant relations with. The dinner was of special interest to him in view of the fact that last Spring the Stanley Works celebrated in much the same manner the fiftieth anniversary of the election of Mr. Hart as president of their company. The friendships existing between the heads of the two companies dated back many, many years. He wished a continuance of present progress and good spirit in the company.

Mr. A. A. Brown, an old representative of the firm, regaled the company with some of his experiences on the road.

Mr. Hanna, formerly connected with the office staff, expressed delight at the opportunity to again meet old friends and honor his former employees.

At the invitation of Chairman Newman, short addresses were made by George Ramsden, Geo. Goldthorpe, James Reid, A. W. Adams, George H. Cornell, J. W. Dowling and J. T. Terrell.

Mr. Ramsden, the oldest traveler of the firm, had represented them for almost thirty years, and had enjoyed his relations with the concern from the beginning. He was proud to be connected with a firm so highly respected.

Mr. Goldthorpe, who had been with the firm since 1860, paid a warm tribute to the manner in which they treated all their employees. He hoped his grandchildren might be with the firm when it celebrated its next fiftieth birthday.

Mr. Terrell and George Browne expressed the general goodwill of the traveling staff toward the firm, Mr. Terrell dating his sincere loyalty from the first day he was with them, when one of Mr. Newman's warm handclaps had gladdened his heart. Mr. Terrell's stories "brought down the house" every time.

Messrs. Cornell, Dowling, Adams and Reid added warm tributes to their employers, expressing the kindly feeling that existed through the establishment in all departments.

"The Press" was next proposed and responded to by D. O. McKinnon, of Hardware and Metal.

"The Ladies" brought forth a neat speech from Howard Pillow, one of the young men of the company.

During the evening the following programme of music was rendered:

Selections.....	Orchestra.....
Song.....	The Maple Leaf.....E. Roberts
Song.....	O. Carillon.....J. W. Barre
Song.....	The Midship Mite.....R. Platt
The song of the Blacksmith.....	J. C. Newman
Song.....	Selections from Dorothy...Geo. Browne
Selection.....	Orchestra.....
Song.....	Selected.....J. H. Meikle
Song.....	Cam'Ye by Athol.....J. R. Mackay
Song.....	Selected.....A. Macfarlane
Song.....	Comic.....F. Horsfall

The evening closed with "God Save the King" and "Auld Lang Syne."

NICE CHRISTMAS PRESENT.

The Imperial Varnish & Color Co., Limited, are distributing amongst their friends an aluminum pocket comb enclosed in a neat little leather case. It is very handy for the pocket and no doubt the Imperial Varnish Co. will be pleased to send one to any one enquiring.

Dominion Commercial Travelers' Annual Banquet

Montreal, December 22, 1904.

"The night shall be filled with music
And the cares that infest the day
Shall fold their tents like the Arab,
And as silently steal away."

THE quotation appended above never had a more apt illustration than that given last Thursday evening, December 22, at the Windsor Hotel,

Montreal, when the thirtieth annual banquet of the Dominion Commercial Travelers' Association was held. From all parts of the Dominion and even beyond its confines from the land of Uncle Jonathan came the men of the grip and the sample trunks to join with their fellows in happy reunion and good fellowship around the festive board—and to cement closer those bonds of unity that strengthen their hands in the great work of building up the commercial greatness of the awakening giant of the Northern Zone. The thirtieth annual banquet of the Dominion Commercial Travelers' Association was a grand success from every point of view, from the aspect of a splendid menu, a feature of life in which the traveling salesman justly claims some recognition as a critic; from the musical standpoint, for orchestra renderings and songs of some of Montreal's leading soloists were a treat not soon effaced from the memory; from the intellectual side, for the speeches of the distinguished and brilliant young orator the Hon. Rodolphe Lemieux, Solicitor-General of Canada, and Hon. F. D. Monk, leader of the Conservative party in Quebec, were powerful, patriotic and soul-stirring in the highest degree; from all these aspects was the banquet a banner affair as well as from the thoroughly optimistic tone that pervaded the large assembly of merchants, salesmen and travelers, and burst forth in vigorous applause at every reference to this great and growing country of Canada, and her undoubted future great position among the nations of the earth.

The commercial traveler is optimistic under almost every circumstance, and it is this very feeling that makes for prosperity for himself, his house and his country. It is this confidence so deeply rooted in his being that makes his work of such vast importance to the country; his hand is continuously on the pulse of trade and every beat of that pulse is watched and studied with a care as great and thorough as that of the physician watching his patient. Sir Knight of the Grip-sack is the living barometer of the storms and calms of commercial life. At Thursday's banquet the travelers threw off the cares of their strenuous life and enjoyed themselves as only they can—music, jollity and mirth were in the air and the beau-

tiful banqueting hall of the Windsor it is safe to say never resounded with a heartier ring of merriment and good fellowship. French and English-speaking travelers were about equally represented and as the speakers alternately addressed the gathering in French and English, the rounds of applause rose and fell appreciatively and indiscriminately—it was "Canada mon pays," and "The Maple Leaf," and "The King, God Bless him," from start to finish. Certainly in its entirety no more patriotic assemblage could be brought together.

Letters of regret at inability to be present were read from the following: His Excellency Earl Gray, the Governor-General, Sir Wilfrid Laurier, Sir Richard Cartwright, Hon. W. S. Fielding, Hon. Wm. Paterson, Hon. Chas. Fitzpatrick, Hon. H. R. Emmerson, Hon. Clifford Sifton, the American Consul, G. T. Bell, General Passenger Manager, G.T.R.; C. E. E. Ussher, General Passenger Manager C.P.R., and others.

President J. S. N. Dougall, was the chairman and on either side of him at the table of honor sat Hon. Rodolphe Lemieux, Mayor H. Laporte, Hon. F. D. Monk, Hon. J. W. Rolland, Senator Cloran, Ald. H. B. Ames, M. P., R. W. Ballantyne, A. Hudon, W. Pouliot, R. C. Wilkins, C. Mann, H. Demers, A. Lefleur and W. Murphy.

At 10.20 President Dougall called the meeting to order and in a brief speech expressed the pleasure it gave him to welcome so many guests on this, the thirtieth anniversary of the association, which had grown from 251 members in 1875 to 4,815 at the present time. The largest increase being made in the last year. The benefit association, he said, had also greatly increased, both in membership and financial position, with a handsome surplus and a capital of over \$242,000. In a further speech, Mr. Dougall set out the benefits of membership in the association, and read letters from various railways promising better ticket arrangements.

"Our King" was then drunk, with the National Anthem and cheers, while Mr. Duquette sang "Rule Britannia," amidst great applause.

The toast of "The Government of Canada," was proposed by W. J. Egan, vice-president, who coupled with it the names of Hon. Rodolphe Lemieux and Hon. F. D. Monk, the former replying on behalf of the Government and the latter for the loyal Opposition. Mr. Egan's genial countenance shone with thoroughly happy Irish humor and his tongue, true to the oratorical instincts of his race, was eloquent and witty. His allusion to the commercial travelers as

"being practically only traveling freight agents for the railways" was a hit and the soft satire of the bon-mot was received with appreciative laughter and applause.

Hon. Rodolphe Lemieux in his response by his patriotic words and the vigorous sincerity of his delivery aroused the greatest enthusiasm. He said in opening that before coming up that afternoon he had at Ottawa met Sir Wilfrid Laurier, hale and hearty as ever, and Sir Wilfrid had desired him to wish the association, on his behalf, all success and a merry Christmas. The members of the Government, as well as of the Opposition were also commercial travelers, for they were all working for the good of Canada, and had to do a great deal of traveling. It gave him great pleasure to appear for this toast with that great Canadian who was at the head of the Conservative party in Quebec, the Hon. F. D. Monk.

As to the Government, whichever party was in power, it was always a Canadian Government, loyal to their country and its institutions. Canada's history during the last fifty years showed a development equalled by no nation under the sun. Under the British flag, it had developed from a Crown colony to one of the nations of the earth, and its trade had grown proportionately, the Dominion being at the head of all nations in its expansion of trade during the last ten years, and he felt sure the commercial travelers had taken no mean share in this development.

Steady Forward Policy.

"We intend to pursue the policy started twenty years ago by Sir John Macdonald and continued by Sir Wilfrid Laurier. We intend to be Canadians first and Canadians always. We intend to remain loyal to the institutions of our country, loyal to Canada and loyal to our King. Let us hope that English and French will always work united hand in hand for the future of our country."

Referring to his recent trip to England, Mr. Lemieux spoke with pride of the passing of the Anglo-French treaty bill in the Imperial Parliament, which event he witnessed, when he had also heard that great Canadian, Hon. Edward Blake, speak in support of the measure.

Elements of National Greatness.

"Canada has every element of national greatness," proceeded Mr. Lemieux. "We have a good constitution given us from the early days of British rule in Canada—a constitution for which I would be willing to live and willing to die. As a student of history I say that we French-Canadians enjoy more

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liberty under the British flag than we could under any flag on earth. We must remember what the British Parliament has done for us since 1774, when by the Quebec Act they gave us our civil and religious rights, and it would be ignorance not to let our French-Canadian fellow-citizens know that we owe our present extended liberties to this wise policy of Great Britain. Let me say to our British friends that they need never be afraid of the loyalty of their French-Canadian people—loyalty as strong to-day as when they refused to join hands with Lafayette and Rochambault in support of the American revolutionists. They then stuck to the British flag with a loyalty which has not been known enough in Canada during the last twenty years.

"Let me say to you all at this end of the prosperous year 1904; let me repeat to everyone of us, that we are bound to live together in peace and harmony in the great country, which I am confident is bound to become the greatest country on the American continent; or as Sir Wilfrid Laurier expressed it that "if the nineteenth century was the century of the United States, the twentieth century is Canada's century."

Mr. Lemieux repeated the greater part of his speech in French out of compliment to the many French-Canadians present.

Mr. Duquette then led in the singing of the Maple Leaf, after which "Canada, mon pays" was rendered by E. O. Labelle of St. James' Cathedral choir.

F. Cains, of Brophy, Cains & Co., Montreal, treasurer of the association, then proposed the "Parliament of Canada" with a neat speech.

Senator Cloran was the first respondent to the toast, speaking of course from the legislative point of view of the red chamber. He humorously blamed Mr. Monk and Mr. Borden for adding so much to the strenuous life of Parliament.

The Hon. F. D. Monk, M.P., on rising to respond was received with such continuous applause as leaves his popularity among the knights of the grip no longer open to doubt. In a pithy



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strain Mr. Monk pointed out that Great Britain had done what no other nation in history had attempted—set up many nations with independent governments and free constitutions under the folds of its banner, of which all Canadians were so proud. And here we had our Parliament endowed with all the freedom and liberties which had taken seven centuries of struggle to rise in England. It was a heritage of which we are justly proud. But it entailed a great responsibility to properly hold that which we had won, and to maintain at all risks the character of our national feeling and our national Parliament, so that it might

be worthy of our lofty records, and the composite people who make up our growing nation.

Ald H. B. Ames, the newly elected member for St. Antoine division, Montreal, followed Mr. Monk in a short and able speech. Although he had not yet had the distinguished privilege of hanging up his coat in the House of Commons he hoped to find as high a standard at Ottawa as he had always found amongst the commercial men, who knew that they must do honest business, and do it equally, fairly with men of all classes and religions.

The Provincial Parliament was pro-

posed by Past President Max Murdoch and replied to by Hon. J. B. Rolland. The City of Montreal was proposed by A. Terroux and replied to by Mayor Laporte. Trade and Commerce was proposed by R. C. Wilkins, and responded to by C. C. Ballantyne, vice-president of the Canadian Manufacturers' Association. Transportation was proposed by T. L. Paton and replied to by Mr. Morrow, of the C.P.R.

Messrs. A. Woods, E. R. Dufresne, Mr. Brunlan and the St. Louis Quartette contributed excellent songs between the speeches.

The Dinner Committee certainly deserve the thanks of the members for the splendid arrangement and management of the entire affair as well as do the various vice-chairmen of whom there were eight, namely Messrs. Wadsworth, Paterson, Terroux, Rosseau, Egan, Dubreuil, Guilbault, Hayes, who did their duty nobly and well. The members of the dinner committee were as follows: T. L. Paton, convenor; R. Booth, F. L. Cains, F. S. Cote, L. O. Demers, Jas. S. N. Dougall, E. Fred Dugan, J. F. L. Dubreuil, John T. Dwyer, W. J. Egan, W. C. Finley, A. D. Gall, E. E. Guilbault, J. B. Kerr, D. M. Lefebvre, W. B. Mathews, W. Pouliot, Jos. W. Rosseau, Jas. Robinson, Robt. C. Wilkins.

MENU.

Oysters on the Shell.
Anchoix Canape. Celery. Olives. Radishes.
Clear Green Turtle Amontillado.
Smelts au Vin du Rhin.
Cucumbers. Pommes Brabant.
Breast of Chicken Regence.
Cronstade of French Peas.
Mignon of Beef Tenderloin Rossini.
Spinach with Eggs. Mashed Potatoes Brown.

CHARTREUSE PUNCH.

Boiled Quail on Toast au Cresson.
Mayonnaise of Asparagus Tips.
Baba au Rhum. Macedoine Jelly.
Petits Fours. Neapolitan Ice Cream.
Coffee. Cheese. Crackers. Fruits.

List of Those Present.

Besides the guests of honor, there were present: F. Boudrette, A. C. Miquelon, A. R. Greene, P. L. Frenette, Chs. Staint-Jean, Raoul Tranchemontagne, Rod. Bedard, C. Jodoin, Leon Rolland, H. Eidney, Stein, N.Y.; J. Thurston Smith, A. U. Butler, Rev. W. Graham, W. J. Agnew, O. S. Perrault, J. N. Chevrier, J. P. Dumaresq, H. L. Perchard, W. J. Gallon, Edward Foster, Geo. L. Shepherd, P. B. Coulson, J. D. Shaw, J. Paterson, Gus Harries, J. W. Anderson, John Kingan, W. E. Robertson, Miles Birkett, H. Gordon Browne, E. W. James, Geo. R. James, Eugene Tarte, La Patrie; F. D. Shallow, George W. Bonner, W. Caruthers, H. W. Snetsinger, W. A. Jackson, F. A. Wray, D. W. D. Spry, E. Straker Lawton, Clinton Henderson, Harry A. Rutley, D. I. Henderson, M. J. J. Toole, J. H. Small, Joseph Daoust, S. D. Joubert, P. E. Joubert, J. R. Grenier, W. H. Cornell, L. Girard, C. C. Davidson, Alex. B. Coyle, Arthur Terroux, Jas. K. Oswald, A. Ross, Crawford, A. W. Childs, S. W. G. Dettmers, W. R. O. Bowie, Geo. P. Watt, G. J. Martin, E. B. Scott, J. O. Authier, E. Hurette, W. R. Wonham, L.

O. Grothe, Cunningham, Strina and Wray, H. Gagnier, J. Art. Marchand, Alex. Davis, H. R. Hamilton, G. Milroy, H. B. Muir, T. W. Dodds, F. Cooper, E. W. Barlow, G. H. Bishop, H. E. Stubbs, Allan J. Munro, J. O. Hays, W. H. Newton, W. H. Evans, George Pyke, W. H. Hamilton, Romeo Brosseau, Arthur Lamarche, Jos. N. Brossard, Ludger Gravel, Jos. W. Rousseau, L. M. Desparois, J. E. Garneau, A. Daigneault, Victor Laperle, Alfred Lortie, S. Grunluse, J. W. Gall, E. H. Moles, Fred Russell, I. Passeyham, C. L. Higgins, J. A. Nutter, William B. Naylor, Robt. L. Rice, Laurie Russell, Eugene Engels, James G. Kerr, John J. Ritchie, H. Percy Woodley. W. S. R. Robichaud, Anatole Tranchemontagne, C. Robichaud, Rodolphe A. Pageau, B. Simpson, A. Bruce, Leslie Drake, Thos. J. Rodger, Fred L. Barlow, E. Brodeur, M. N. O'Connor, P. I. M. Caffrey, Gax. Beauvais, V. Coss-Karbriton, J. O. Boucier, M. R. Cuddihy, J. H. Palmer, Fred Caldicott, W. Pouliot, F. S. Cote, Mr. I. Irwin, George Cooley, G. E. Cooke, W. R. G. Mathews, Jules Lemaire, Raoul Dupre, W. H. Bryce, Burton Dixon, Eugene Monday, J. E. LeFontaine, G. A. Hudson, J. F. LaRose, Ed. Gravel, Edouard LaBel, E. Duquette, Edouard R. Dufresne, Raoul Dionne, Jas. Pineau, H. R. Landry, J. E. Monday, J. A. Wrance, Alex. Felkr, professor; Dr. Fleury, tenor soloist; Arthur Nelson, Vancouver; Newton A. Hill, J. Wilfrid Deziel, Henri E. Quesnel and J. Albert Quesnel, of Chaput & Fils, Company; Eugene Pepin, Aime David, Antonio Valiquette, F. Q. Bermee, W. E. Hayes, S. C. Cumming, Emile Bourassa, Normand Giroux, L. A. Berti, J. R. Dery, of Genin, Trudeau & Co.; J. and E. Bureau, of Lewis Bros. & Co.; R. Edgar Markgarf, of Alfred Eaves; Stuart M. Ross, John Graham, of the J. C. Wilson Co., Ltd.; Raoul Dupre, E. Lafontaine, Eug. Monday, Burton Dixon, J. H. Maistre, G. A. Hudson, Raoul Durpe, Alfred T. Houston, W. H. Boyce, Wilfrid Seers, J. C. Macfarlane, Jas. Gravel, of the Canadian Rubber Company; J. K. Woods, Alfred H. Brittain, of Black Bros., Co., Ltd., Halifax; Jas. Ferres, B. J. Deyhlon, Arthur Ste. Marie, P. C. Adair, and A. A. Tyers, of the G. B. Co., Ltd.; Hercules Giroux, Thos. Mav Co., Ltd.; Z. P. Benoit, of Regent Mills Co.; W. Lauriaux, J.C.M.; Winfred Stewart, of McCaskill, Dougall & Co.; Gaston Drainville, Arthur Des Coteaux, Gault Bros.; Z. Duchesneau & Co.; Rodrigue Goulet, E. E. Guilbault, J. Villeneuve, John Trotter, G. J. Langlois, Thos. J. Parkes, J. E. Hayden, L. W. Elliott, W. E. Jackson, A. R. Urgus, Wm. H. Syler, Montreal editor of The Canadian Grocer; F. S. Keith, Montreal editor of the Hardware and Metal; Geo. Macowans, representative of the Witness; W. Vass, Aoult Bros. Co., Ltd.; Joseph H. Cogeman, Gazette; T. R. Booth, W. R. Brock Co., Ltd.; S. W. Haskett, H. C. Brodie, C. H. Fetherstonhaugh, John McEntyre, Alf. Nutter, J. J. O'Donnell, J. B. Giles, John Goldthorpe, Thos. L. Paton, W. J. Egan, Geo. S. Clvhorn, A. Hewat,

W. E. Short, Robert Wall, A. R. Coloin, A. B. Couchn, J. Dwane, H. G. F. Wat, John A. Garipey, I. E. Thown, Geo. M. Edwards, Man. Dis. Henderson & Potts Co., Ltd.; J. Irwin, secretary, Henderson & Potts Co., Ltd.; A. B. Caswell, Montreal manager Maclean Publishing Co.; H. E. Fontain, the Price Curant; H. Nightingale, Tissus and Nauveantes, Arsene Laguere, Liquers and Tobaccos; Jacob Mazurna, Monetary Times; P. Urquhart, Ottawa.

Special Bargains.

The Tuckett Cigar Co., Hamilton, Ont., W. R. Webster & Co., Sherbrooke, and the S. Davis & Sons Co., distributed their excellent makes of cigars freely among the guests and participants. "Marguerites," "El Presidentes" and "Clear Havanas" were thoroughly enjoyed.

The American Tobacco Co., of Canada, had a souvenir package of Sweet Caporal and Mogul cigarettes and a supply of patent lucifers at each plate. T. Theo. Valiquette, supplied a neat package of smoking tobacco.

The press table, thanks to T. L. Paton, W. J. Egan and Fred Gains, were graciously remembered when the arduous work of taking down the proceedings momentarily lifted.

The popularity of "I Crow Overall" foods was evident judging by the enthusiastic reception accorded R. C. Wilkins. That gentleman certainly received an advertisement whose clarion notes will sound throughout the Dominion when "the boys" get their new certificate in use.

The travelers' certificate cases presented by the J. B. Rolland Paper Co., was a much appreciated souvenir.

H. H. Brittain representing Black Bros. & Co., Halifax, was in his element. He was at home with "the boys" that are always "fishing" for orders and many a "cod" was tied to the "stake" (steak).

A certain "vermillion" hue that hung over one of the tables was not due to the presence of the Canada Paint Co.'s representatives, though there were present from that company Harry Stubbs, Alan J. Munro, W. B. Hamilton, W. H. Newton, W. H. Evans and Geo. Pyke.

THE "BOWSER."

The question of storing oils in such a manner as to prevent loss by leakage, accumulation of dust and dirt, oil soaked floors and consequent fire danger, has been successfully solved by the Bowser Self-Measuring Oil Tanks, manufactured by S. F. Bowser & Co., Fort Wayne, Ind.

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NEW METHODS FOR THE YEAR 1905.

WITH the beginning of this new year, another round in the ladder of mercantile life has been reached, but as there is no standing still, retailers must prepare for the work of the new year. Great preparations must be made to reach the higher possibilities which another year may bring forth. Gains and losses must be discovered and an inventory made that will perhaps disclose mistakes that might have been avoided by pursuing a different course. It isn't a pleasant task but by knowing errors, profit should inevitably accrue. A lesson must sometimes be learned at great expense.

There must be a balancing of methods involving plans for future work and whether these plans are of small or large proportions, the principle is the same in passing from old to new conditions. Primitive business methods must give way to highly organized and developed systems. One must study old methods to see what can be dispensed with and

what can be improved, if the machinery of mercantile methods is to be advanced.

Perhaps, many have fallen into a rut and do not know how to get out. Such ones must come out of their shell and study what others have done to achieve success. After all, methods of business are but the outward manifestations of the business man and all must probe into the new ways of business and adapt themselves to new methods of procuring success. The business field is wide, with plenty of room for all, and a luxuriant field looms up for the ensuing year, for all who will understand.

INCREASE IN NICKEL PRODUCTION

ONE of the Ontario Ministers speaking the other day, referred to the development of mining in Ontario, and said that in nickel Ontario controlled the market of the world, that the output this year alone was valued at \$2,500,000, that next year, owing to the increased facilities and extensions of plants, the output would amount to fully \$5,000,000. These are important facts which many of the leading newspapers overlook. It is remarkable how small an amount of attention is given to the most valuable side of our mineral productions by the Toronto dailies. If a gold or silver mine comes into prominence they are full of it. Last week some shipments of silver ore were made to New York which realized a little over \$100,000, and several of the dailies devoted a column or more to this subject. It is a fact that not one of these has yet discovered that a million dollars' worth of new mineral had been taken out of the refuse of the Sudbury mines this year—a matter which was announced in these columns over a month ago.

STEEL RAILS.

PROBABLY the most nearly absolute monopoly in the United States is that enjoyed by the manufacturers of steel rails. The Steel Rail Association consists of the United States Steel Corporation, the Lackawanna Steel Co., the Pennsylvania Steel Co., the Cambria Steel Co., and the Maryland Steel Co. The only other producers of rails are the Tennessee

Coal & Iron Co., and the Colorado Fuel & Iron Co., but their competition is not sufficient to effect the price of the "combine."

The production of the "combine" is adjusted substantially in accordance with the apportionment of earnings. It is said that the actual tonnage capacity is placed at 2,000,000 tons for the Steel Corporation, 600,000 for the Lackawanna, 400,000 for the Pennsylvania, 300,000 for the Cambria, and 200,000 for the Maryland.

Throughout the depression of the past year the "combine" held the price of steel rails at \$28 a ton. Railroads, owing to the increase in general expenses and the difficulty of raising funds, held off from buying. But now that better times have come and expenses have been somewhat reduced, the transportation companies are again in the market for rails. Notwithstanding the price of rails continues firm. The "combine," presuming on the growing needs of the railroads and the imperative demand that must come in time, and on the duty of \$7.84 a ton on foreign rails, has held its position, slowed down its production, "dumped" surplus in foreign markets, and waited for the railroads to "come to time."

THE ENGLISH POSTAL C.O.D. SYSTEM.

THE Canadian country storekeeper has undoubtedly a hard time to compete with the large departmental mail order stores, but when compared with the merchant in the smaller towns of Great Britain, he is literally in clover. Rural free delivery is supplemented by a parcel post by which boxes of dry goods may be forwarded by mail. The latest move is the further extension of this parcel post system by the Government considering the establishment of a postal c.o.d. system, by which the letter carrier will collect the money for the mail order concern.

Naturally, the storekeepers are up in arms, and ably seconded by the trade journal press have made a united "holer" which has temporarily checked this obnoxious project. A great deputation of imposing proportions armed to the teeth with facts, arguments and figures, waited upon the public department in

Aldersgate street. Combative speeches were made in the retailers' interests insisting upon their important status and claim to consideration. His lordship, the postmaster-general, was asked to enter into the feelings of a small storekeeper who saw an official in His Majesty's uniform pass his door laden with parcels for customers whose accounts with the merchant were perhaps overdue.

Lord Stanley replied to the deputation in a fair and thorough manner, clearly showing that the cash-on-delivery system was nothing more than the consolidation of the parcel post and postal orders. He thought it a simplification of the present method and would in no manner extend the parcel post. However, in the face of such bitter opposition it was not his intention to put the cash-on-delivery system in operation in England, but he would do what he could in regard to the colonies and dependencies in establishing some method which would help in the exchanging of commodities.

The old adage "unity is strength" has thus been once again vindicated and the plans of the Government against the prosperity of the small trades have been overthrown by the energy of the commercial community. That this problem will have to be faced again by our British friends is certain and it is only by united effort on the part of all concerned that it can be squelched.

A MATRIMONIAL SCHEME.

A COMMON source of friction, especially in large establishments, is the occasional subscriptions which are taken up in order to give presents to persons entering matrimony or leaving for other fields of labor.

The head of a large manufacturing firm in Toronto was recently induced to to inspect a list which had been gotten up among his employes and he found that some of them had given more than he thought they could afford to give. He then determined to change the system and had a box made in which when any subscriptions were taken up among the employes they could drop in their contribution without anyone knowing the amount they had given. He says

that the aggregate of the contributions decreased, but he is confident that his employes now give, when occasion demands it, just what they can afford to give.

The scheme is a simple one and could no doubt be adopted to advantage by many other firms, and the old system, which is practically a system of blackmail in many cases, could be obviated.

CHANGE YOUR ADS.

When you meet a friend on the street nearly every day, and stop and talk with him, you don't recite a set speech to him every time you meet him. Then why do you use the same old ad. day in and day out? Your readers are as tired of it as you are. You must tell them something new every time they meet

Carter Bros, hardware and paint and oil dealers, Picton, Ont., write:

"We always mention Hardware and Metal when ordering goods we see advertised in that paper. In ordering a scale the Fairbanks Co. had advertised in Hardware and Metal some three or four weeks ago, we simply tore out the page and sent it telling them to send one for our own use."

you in the columns of the paper, or they won't stop and read your ad. Attract their attention and make them listen to what you have to tell them. Let it be new, bright, interesting. Tell them what you would tell them if they had come into your store to ask about the particular goods you are exploiting.

EDUCATE THE FARMERS.

SOME farmers are skinflints. But fortunately their number is exceedingly small. It may be said of the farmer on the whole that he is about as freehanded a citizen of this country as it is possible to find. When crops are good and money is plentiful, the farmer comes to town and spends it.

The farmer needs things and he buys them. He likes luxuries in dress and furniture and food, just as much as anybody else and he is going in for

these luxuries more than ever to-day. Moreover, it will be found that the farmer, unlike the average inhabitant of our towns and villages, believes in patronizing the home market. He does not run to the city and the department store every time he wants to buy a suit of clothes or a keg of nails. No, he goes to the nearest town for his supplies.

Seeing then that the farmer is a good customer and stands by the local merchants, let the latter take him into their best consideration. Let them reason it out. The more the farmer can get for his produce, the more money he will have to spend. How can he get more for his produce? Certainly by the adoption of improved methods of tilling the soil, of raising cattle and of keeping poultry. No less a sum than \$117,000 was paid to patrons of the Huntington dairy board during the past season for cheese and butter. This means on an average about \$4,000 from this source alone to each retailer in Huntington and this was all accomplished by education.

Is it not, therefore, of importance to merchants in our country towns to work together to help and educate the farmers in their vicinity to get more out of their farms?

REPUTATION.

QUEER thing, this reputation. It takes toiling and mulling to get it—takes singleness of purpose and capacity to resist temptation to cheapen, but once you've got it its value is transcendent and can't be computed in dollars and cents. How infinitely better it is to build on a foundation of quality and worth than to chase the will-o'-the-wisp of cheapness, which leads you into bogs and swamps.

"But my trade won't pay the price," wails some timorous soul. Your trade, dear man, is what you make of it. If you insistently talk quarter tea, and ten-cent brooms and five cent brushes and ninety cent apples and fifteen cent oranges, how in the name of sense can you expect your trade to ask for anything else? Try the other. Talk quality, emphasize worth, lay stress on inherent goodness, and watch the result.

Cut loose from cheapness, for you are leaning on a broken reed that will give you a bad fall one of these days. Profit and prestige lie in selling good goods. Is any feeling so all-satisfying as the consciousness that your name stands for the best?—for quality?

ADVANCE IN PAINTS.

There has been a sharp advance in white lead recently, owing to the very keen advance at the corroding plants of lead producers, and the leading manufacturers in the country have advanced their prices on ground white lead, red lead, litharge and orange mineral. There has also been a smart appreciation in the values of high grades of pure white zinc, generally known as zinc oxide, and indications point that figures for the article will be quoted from 50c to \$1 per cwt. in advance. A stiffening of the prices of these staples will also tend to strengthen the prices of mixed paints and other lines.

PRESENTATION.

A GRATIFYING expression of the Christmas spirit was given on Saturday last, in the offices of Douglas & Ratcliff, Limited, paper merchants, Toronto. The staff presented each of their principals with a very handsome bill case, with the wish that next year's business would fill these wallets to overflowing. Coupled with the presentation were addresses in which the employees expressed their pleasure in working for men who thought so much of the welfare of their staff. Mr. Douglas in replying emphasized the principles of justice and integrity which they sought to incorporate into every detail of their business. Mr. Ratcliff in his acknowledgement assured his hearers that they were esteemed to be more than mere employees, that they were an integral part of the business, that they were real contributors to any success the firm might have attained.

It may be remarked that this expression of good will was not alone on the side of the employees. It is the practice of Douglas & Ratcliff to present each member of their staff with a gold piece each Christmas, and this year was no exception.

COMMERCIAL AGENT FOR MEXICO.

Mr. A. W. Donly has been appointed Canadian Commercial Agent for the Republic of Mexico by the Department of Trade and Commerce.

Mr. Donly is a Canadian, 38 years of age, and a native of Simcoe, Ontario. His father is registrar of deeds for the County of Norfolk, and his brother was the Liberal candidate for that county in the recent general elections. Mr. Donly is an undergraduate of three years' standing of Victoria University, being a member of the class of 1890. He has lived in Mexico for the past fifteen years, and has had large business connections throughout the republic. Mr. Donly reads, speaks and writes the Spanish language with the same fluency as his native tongue.

GOSSIP OF THE TRADE.

Heard by "The Man on the Inside."

WELL, here we are again at the end of another year, and good wishes and seasonable greetings are once more in order. I am sure I wish every reader of Hardware and Metal in general, and every reader of this new department in particular, all the compliments of the season, and may everybody's new year be a prosperous one. The hardware trade has braced up considerably since the depressing period last Spring, and it looks as if it would burst into 1905 with a good old-time rush. I trust for the sake of us all that this will indeed be the case.

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Of course nobody cares to talk much about business this week, and I have found it quite difficult to glean any items of interesting news. But under the circumstances I am sure this omission will be pardoned.

• • •

The regular monthly meeting of the plumbing supply houses of Toronto was held in the offices of Jenkins & Hardy, 15½ Toronto Street, on Wednesday afternoon, Dec. 28. Those who were present were: Chas. Morrison, representing the James Morrison Brass Mfg. Co.; Wm. A. Porter, of the Ontario Lead and Wire Co., and B. J. Morris, representing the Jas. Robertson Co. I understand that one result of this meeting will be an advance in the price of a good many lines of plumbing supplies. This advance will go into effect very shortly.

• • •

Gordon T. Park, until recently manager of the retail store of McLennan, McFeely & Co., of Vancouver, B.C., has opened an office and warehouse at 313 Water street in that city. I understand his purpose is to engage in the hardware commission business, representing eastern and Old Country manufacturers. Mr. Park has resided in British Columbia for nearly 14 years, and for several years had charge of the hardware business of the Hunter-Kendrick Co., of Grand Forks. He is thoroughly familiar with the trade of the Pacific coast, and extends an invitation to all interested to correspond with him with a view to handling some good lines.

• • •

I think the recent action taken by the Health Department of Ontario is a good one for every person connected and interested in any way with heating, lighting and plumbing. Under the guidance and patronage of the Provincial

Secretary, Hon. George P. Graham, and Hon. W. A. Charlton, Minister of Public Works, the Health Department have obtained permission to hold a permanent exhibition of both ancient and modern fixtures, illustrating the progress that has been made in the plumbing art since remote times. For this purpose two large rooms in the basement of the Parliament Buildings have been obtained for the use of the exhibitors and those interested. The idea is to have the museum run on similar lines to those of the Royal Sanitary Institute of London, England. Departments will be set aside for each branch of the work and an effort will be made to show to the public in a simple and practical way the progress made during the last century. Although the idea is in its infancy, I was shown numerous letters stating that the writers were anxious to contribute something towards the exhibition. I was also told that several articles had been obtained, and if the present progress is maintained the committee in charge hope to be able to throw open the doors to the public at no distant date. Persons or parties at all interested might communicate with Dr. Hodgetts, of the Health Department, Toronto.

DEATH OF THOS. D. ROGERS.

IT is with deep regret that Hardware and Metal chronicles the death of Thos. D. Rogers, of the Rogers Hardware Co., Limited, Charlottetown, P.E.I., which occurred on Friday last after an illness extending over four months.

The late Mr. Rogers was one of the brightest young business men of this city. He spent a year and a half in Vancouver, B.C., returning to the Island to re-enter the business of what is now known as the Rogers Hardware Co., Limited. He was a member of Victoria Lodge, A.F. & A.M., also of the I.O.O.F. the Canadian Order of Foresters and the Prince Edward Island Lighthorse, in which latter he held the rank of corporal. In all his relations, business, social and private, it is not too much to say that all who came in contact with him liked "Tom" Rogers. His gentlemanly bearing, never failing courtesy and generous nature made him a special favorite, and his demise in the flower of youth has caused widespread and sincere sorrow.

MARKETS AND MARKET NOTES

(For detailed prices see Current Market Quotations, page 62.)

QUEBEC MARKETS.

Office of HARDWARE AND METAL.
232 McGill Street,
Montreal, Dec. 31, 1904.

Hardware.

ORDINARY trade is much quieter this week, being the last of the year and as usual seeing little new business undertaken. Travelers are not all on the road as yet, as some are making final preparations for the coming year. Holiday trade keeps up well, since among the French, New Year's Day is the day of giving, as Christmas is amongst the English-speaking population. The city and town stores throughout the province have thus been sending in large orders for holiday goods, making a brisk demand. Prospects for the coming year are of the brightest and a large volume of business in all lines is anticipated.

Hockey Sticks and Pucks—The market continues active. Quotations are: Boys' hockey sticks, from \$1.50 a dozen up; men's, \$2.25 to \$3.50 a dozen; regulation pucks, \$2 a dozen; juvenile, \$1.15 a dozen.

Plated Ware and Cutlery—Business is good. Quotations are as follows: Rogers 1847 goods 45 per cent. off list; case carvers from \$2 to \$10 per set; scissors in cases 90c to \$2.

Skates—The demand keeps up well. Quotations are: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Axes—Orders are few this week. We quote: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—Trade is somewhat quieter. Our quotations are as follows: Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3, \$1.50 a dozen.

Carpet Sweepers—A fairly good demand. Quotations, \$21 to \$31 a dozen.

Food Choppers—The demand has fallen off considerably. Quotations are: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Sewing Machines—Market still active. We quote as follows: Hand

sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Lanterns—Orders are still coming in in large quantities. Quotations are: Cold Blast, \$6; No. 0 Safety, \$4 a dozen.

Sleigh Bells—This is one of the briskest lines at present, good sleighing creating a splendid demand. Quotations are: Brass team bells, rough, \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5 a dozen; nickeled, \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—Large orders for snow shovels have been sent in recently. Our quotations are as follows: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount; Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Barb Wire—Little movement. We quote as follows: \$2.75 per 100 lbs. f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Fence Staples—No change from a week ago. We quote as follows: \$2.65 per hundred lb keg for bright, and \$2.85 for galvanized; 25 to 50 lb packages 25c extra.

Rivets and Burrs—The market is strong but little activity prevails. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—A fair trade is being done. Discounts: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—Orders received this week are fewer in number than before, the market being quiet.

Wire Nails—There is little activity. We quote \$2.20 per keg. f.o.b. Montreal.

Cut Nails—Very few of these moving. We quote \$2.20 per keg. f.o.b. Montreal.

Horseshoes—Although the demand has fallen off, there is a fair activity. We

quote: "P. B." new pattern, base price \$3.50 per 100 lbs.; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—The demand is fairly good.

Sporting Goods—A fairly satisfactory volume of trade is still being done in sporting goods. Quotations are as follows: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand. Standard shot, \$6.50 per hundred lbs; chilled, \$7 per 100 lbs; buck and seal, \$7.50 per 100 lbs; ball, \$8 per 100 lbs. We quote discounts 15 per cent, f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—Business in this line has fallen off to a very low ebb and little movement prevails.

Cordage—For the past year the cordage business has not been entirely satisfactory, but prospects for the coming year are of the brightest.

Cement and Firebrick—Hardly and stock moving. Our quotations are as follows: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—Little business is being done. Quotations are as follows: 5-16 in. \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3; one inch, \$2.95.

METALS.

Orders for metals are still being freely booked on an advancing market so that the prospects for future activity are very bright. In bar iron and steel there is some movement, but in pig iron, Canada plates and sheets, few shipments are being made. Tin has fluctuated considerably during the week and closed slightly stiffer. Pig lead is somewhat easier and a slightly reduced price is quoted. All other prices remain as before.

Pig Iron—Not a few orders are being placed for delivery at six months hence, so that the outlook for activity during the coming Summer is good. Prices remain as before. We quote:

"Disc," No. 1.....\$16.50 delivered Montreal.

"Dom.," No. 1..... 17.50

Usual difference in price for lower grades.

Ferrona No. 1.....\$18.00 delivered Montreal.

" No. 2..... 17.50

" No. 3..... 16.50

" No. 4..... 16.00

Londonderry, \$18.50 to \$19.00 delivered Montreal.

Glengarnock..... 20.00

Gartsherrie..... 19.25

Carabroe..... 18.50

Carron No. 1..... 19.50 delivered Montreal.

(special)..... 18.50

Ayresome No. 1..... 18.00

" No. 3..... 17.50

Summerlee..... 19.50

Clarence No. 1..... 18.00

" No. 3..... 17.50

No. 1 Cleveland..... 18.00

Bar Iron—The market is active. We quote: Merchants' bar, \$1.77 1-2; horseshoe iron, \$2.02 1-2; forged iron, \$1.97 1-2, net cash thirty days.

Tool Steel—The demand is fairly good. Our quotations are as follows: Black Diamond, 8c to 9c; Sanderson's, 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb; Conqueror, 7 1-2c; Conqueror High Speed steel, 60c.

Merchant Steel—There is some activity with a firm market. We quote: Sleighshoe, \$1.82 1-2; tire, \$1.92 1-2; spring, \$2.75; toecalk, \$2.42 1-2; machinery (iron finish), \$2.02 1-2; square harrow, \$1.92 1-2; reeled machinery steel, \$2.75; mild, \$1.82 1-2; rivet, \$1.82 1-2; net cash thirty days.

Cold Rolled Shafting—Considerable is being called for from industrial establishments. We quote: Cold rolled shafting, 3-4 in. to 17-16, \$3.85 per 100 lbs; inch and a half to 3 inch, \$3.50 per 100 lbs.

Canada Plates—The market is firm but quiet. We quote as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—Little stock moving. Quotations are as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—A large amount of stock has been ordered for future delivery, but at present there is little movement. Our quotations are as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge, \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Antimony—The market continues unchanged, which is firm and rather quiet. We quote 9 1-4 to 9 1-2c.

Sheet Zinc—A slightly weaker market prevails and a fair demand. We quote case lots, \$6.75 to \$7; small quantities \$7 upwards.

Tin Plates—These continue as before

with the market slightly easier. Quotations are: Cokes, \$3.75 and charcoal \$4.

Ingot Tin—Earlier in the week ingot tin was weaker, but has closed somewhat stiffer than a week ago. We quote as before: 32 to 32 1-2c, with no shading whatever.

Ingot Copper—It is not known definitely whether the copper market will continue on a firm basis or be governed by speculative changes. We quote: 15 3-4 to 16c, the former price being for quantities only.

Ingot Zinc—Quietness prevails in ingot zinc at present. The market is weak with no change in prices. Quotations are 6 1-2 to 6 3-4c.

Pig Lead—Lead is weaker than before and a reduced price is quoted. The market is fairly active. We quote: \$3.45 to \$3.55, no concessions being obtainable on the former price.

Boiler Tubes—The demand continues fair. We quote: Highets grade soft steel British and American tubes, one and a half inch, 7 1-2c; 2 in., 8 1-2c; 2 1-2 in., 10c; 3 in., 12 1-4c; 3 1-2 in., 16c; 4 in., 20c; 5 in., 45c. Price per foot net.

Scrap Metal and Old Material—There is little new in this market and the conditions enumerated a week ago still prevail. Our quotations are as follows: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 2 1-4c; zinc, 2 3-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 5 1-2 to 6c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,

10 Front street east

Toronto, Dec. 21, 1904

Hardware.

THIS is holiday week, and conditions are holiday conditions. Trade has been quiet for the most part, although the amount of business done compares very favorably with that of the same week last year. Some of the jobbers are very busy taking stock this week, thus taking advantage of the lull of business during the holiday season. Business will probably be quiet until after the first couple of weeks of the new year. Travelers start out on the road again on Tuesday, and that will probably tend to give an impetus to trade that it has not had this week.

The only change to be noted on the market this week is the advance made by the United States Steel and Wire Co. in the price of galvanized wire. Some weeks ago they withdrew their price of \$2.27 1-2 f.o.b. Cleveland, and have this week announced an advance to \$2.37 1-2 f.o.b. Cleveland.

Lawn Mowers—A few orders are coming forward.

Guns and Ammunition—A normal trade is being done.

Washing Machines—The market con-

ditions remain unaltered. The usual trade is being done.

Chain—The normal trade keeps up. We quote as follows: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Barb Wire—Prices remain firm at recent changes.

Galvanized Wire—The United States Steel and Wire Co. have advanced the quotation on galvanized wire. Some weeks ago they withdrew the quotation at \$2.27 1-2 f.o.b. Cleveland, and last week issued a new quotation of \$2.37 1-2 f.o.b. Cleveland; an advance of 10c. A normal trade continues.

Coiled Spring Wire—As was reported on the editorial pages last week, the prices of coiled spring wire have been confirmed, but are liable to change without notice. The usual business is being done.

Wire Nails—The situation is still much the same, and no understanding has yet been arrived at. A fair average quotation appears to be about \$2.25 f.o.b. Toronto.

Cut Nails—Prices remain firm at recent advance. Quotations are \$2.30 to \$2.40 per keg f.o.b. Toronto.

Horseshoes—A very good demand for horseshoes is reported for this time of the year. We quote as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—There is a good demand with unaltered prices.

Screws—A good business is being done, with prices firm.

Rivets and Burrs—The volume of trade is good. Prices remain unchanged.

Bolts and Nuts—There is a good trade with firm prices.

Woodenware—Market conditions remain unchanged, and the normal business continues.

Cordage—As was reported last week the prices on binder twine have been issued by the manufacturers. The prices are somewhat lower than last year, and have been issued several months earlier. We quote: Binder twine, Blue Ribbon, 12 1-2c; Red Cap, 11 1-2c; Tiger, 10 1-2c; and Standard, 9 1-2c; double shingle yarn 10 1-2c; single shingle yarn, 10c; sashcord "Hercules," 30 to 32c; "Star," 36 to 38c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

METALS.

The metal market in general is very firm with an upward tendency. On the British market tin, copper, lead and

spelter are advancing, and all kinds of iron are being advanced both on the British and American markets. There are, however, no advances to be noted on the local market, although an additional firmness is the result of the advances on foreign markets. All-bright Canada plates are still very scarce.

The holiday season has not affected the condition of the market to any extent. There is a very good, steady business being done.

Pig Iron—There is nothing special to be noted on the local market. Orders are now being placed for delivery during the latter part of the coming year. Further advances are to be noted in pig iron on both the London and American markets, and further advances are looked for on the American market. Quotations are as follows:

Middlesboro, f.o.b., Toronto.....	\$18 90
Hamilton, No. 1	18 00
" No. 2	17 50
" No. 1, Hamilton	17 00 to 17 50
Midland, No. 1	18 00
" No. 2	17 00 to 17 50
" No. 1 f.o.b. Midland.....	16 25 to 16 75
Radnor, f.o.b. furnaces.....	27 50
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—Quotations remain unchanged on the local market in spite of the recent advances in both Bessemer and open-hearth on the Pittsburgh and other American markets. The local market is very active. We quote as follows: \$1.80 f. o. b. Toronto, with discount of 2 per cent.; for extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tin—The local market is even firmer than last week in consequence of the further advance on the London market. An advance on the local market is looked for. Quotations are at from 32 to 34c per lb.

Galvanized Sheets—The market is firm and there is a good demand.

Tin Plates—The advances noted last week held firm. There is a good demand.

Canada Plates—All-bright plates are still very scarce. The recent advance holds firm. We quote: Half-polished \$2.50; and all-bright, \$4.

Brass—The market is active and recent advances hold firm. Discounts are 10 per cent.

Lead—The market is very firm, there having been advances on the London market. Sales are good. Quotations are: Pig lead, \$3.60 per 100 lbs; and bar lead \$3.60 per 100 lbs.

Zinc Spelter—The advance of last week in foreign spelter holds, and the market is very firm owing to the further advances on British markets. A very good trade is being done. Quotations are 61-4 to 61-2c per pound for foreign; and 51-2 to 53-4c per pound for domestic.

Copper—Local quotations are unaltered although further advances have been made on foreign markets. There is a fair demand. Quotations are as follows: Ingot copper, 151-2c per lb; sheet copper, 20c per lb.

Antimony—The advance of last week holds firm. Quotations are now from 101-2 to 11c per lb.

Cement—The amount of orders booked this week are small in number. The cold-weather has materially affected trade. Prices continue unchanged. We quote: For carlot orders f.o.b. Toronto, Canadian Portland, \$1.70; American Portland, \$1.70. For small orders ex warehouse: Canadian Portland, \$1.90 to \$2; American Portland, \$1.90 to \$2.

Building Paper—The closing of the building season has caused trade in building paper to become quiet. Prices are the same, and will in all probability continue so for some time.

Firebrick—A number of the manufacturers have taken advantage of the lull in business during the holiday season and have devoted their time to repairing. This has caused a better inquiry for firebrick. Prices remain the same. Our quotations are: English and Scotch firebrick 30 to 35c; American, low grade, 25 to 30c; high grade 32 1-2 to 40c.

Old Material—Lead, tin, copper, zinc and iron have all advanced on the New York and London markets. No change has been affected on the local market, but it is expected that a change will take place shortly. As soon as this change takes place, an upward movement is anticipated in the scrap material. All prices are firm with the exception of "old rubbers," which seem very dull at present. A good movement is current on the local market, especially in copper and lead. Our quotations are as follows: Heavy copper and wire, 12c per lb; light copper, 11 1-4c per lb; heavy red brass, 10c per lb; heavy yellow brass, 8c per lb; light brass, 51-2 to 6c per lb; tea lead, \$2.35 per 100 lbs; heavy lead, \$2.50 to \$2.60 per 100 lbs; scrap zinc, 33-4c to 4c per lb; iron, No. 1 wrought, \$9; No. 2 wrought, \$2; machinery cast scrap, \$12.50 to \$13; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 51-2c per lb; country mixed rags, 65c per 100 lbs.

Coal—Prices continue unchanged. Shipments are delayed somewhat owing to the scarcity of cars. Slack is scarce and prices are firm. Our quotations are as follows: Anthracite in cars at Briges: Grate, \$5.50 per gross ton; egg, stove and nut, \$5.75 per gross ton; pea, \$3.75 per gross ton.

Standard Hocking, soft coal, in cars, f.o.b. at mines: Lump, \$1.60; 3-4 inch, \$1.50; run of mine, \$1.40; nut, \$1; N. P. and S., 75c; coarse slack, 50c; box cars 10 cents per ton additional.

Youghiogeny soft coal in cars, bonded, at the bridges: 11-4 inch, \$2.60; 3-4 inch, \$2.50; mine run, \$2.40; slack, at \$1.90.

LONDON METAL MARKET.

From Metal Market Report, Dec. 28, 1904.

Pig Iron—Scotch warrants, Glasgow, futures at £133 15s, and after sales of 280 tons of spot and 200 tons of futures closed strong at £134 10s for spot and £134 for futures, making price as com-

pared with last week £2 5s higher for spot, and £3 2s higher for futures.

Copper—Spot copper opened firm at £67 10s, futures at £67 17s 6d, and after sales of 300 tons of spot and 850 tons of futures closed firm at £67 15s for spot and £68 2s 6d for futures, making price as compared with last week £1 15s higher for spot, and £1 15s higher for futures.

Spelter—The market closed at £24 17s 6d, making prices as compared with last week 5s higher.

Lead—The market closed at £12 15s, making prices as compared with last week 5s higher.

Pig Iron—Scotch warrants, Glasgow, closed at 53s 6d; and Middlesboro No. 3 foundry, 50s 41-2d.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B.C., Dec. 23rd, 1904.

FROM an industrial point of view, the prospects in British Columbia at the present time are anything but bright. The demoralization of the lumber industry is a serious blow to this province, and every day brings further evidence of the widespread effect of the depression. Yesterday Mr. John Murray, timber ranger, returned from the interior, where he had been collecting dues from the mills on behalf of the Government, and the reports he brings back are anything but encouraging. Very few mills are left running, and those which may be going are on limited time, hanging on to see if anything will turn out. Lequime, the big operator, near Granby, has closed his mill for the Winter and will take out no logs, having a supply on hand. All the yards are overstocked and business is at a standstill. Collections were by no means as easy as a year ago.

Ranchers along the Fraser River, who make considerable money by logging, will do nothing this Winter. The last boom came down a week ago and it would not have been accepted at the mill had it not been ordered. And yet, all that is needed is to have the limited Canadian market kept for Canadians, instead of handing it over to the Americans to be used as a dumping ground at their convenience.

The B. C. Lumber and Shingle Manufacturers' Association's new schedule of prices went into effect on the 20th instant. For some months past there has been excessive cutting, reductions going all the way from 25 to 50 per cent. off list price. The millmen have all agreed to abide by the new list, which gives a general reduction of from 20 to 25 per cent. in prices, the only increase being a slight one in edge grain lumber, which is more or less subject to special call.

• • •

It is encouraging to note that the manufacture of pulp, another branch of the timber industry, will be actively entered into by English companies. Mr. J. M. Mackinnon, managing director of the Canadian Pacific Pulp and Paper

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.

FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.

SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL Pig Iron

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND.

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Prices to Sales Agents

Drummond McCall & Co.
MONTREAL, QUE.

or to

Canada Iron Furnace Co.
MIDLAND, ONT. Limited

Get our prices for

GALVANIZED FLAT SHEETS

THE "VANDA" BRAND

For all purposes requiring the best quality.

It is "deadflat," well galvanized, true to gauge, and specially soft for working-up. We guarantee every sheet bearing our brand.

G.F. JACKSON & CO., Limited

Wholesale Merchants

Ormidale Block, Vancouver, B.C., and
Liverpool, England

Direct Importers of:

Metals of every description, Wire Rope, Portland Cements, Firebricks, Ore Sacks, Grain Bags, etc., etc.

Co., returned at the first of the week from England, and announces that the work begun at Swanson Bay, on the mainland coast, 400 miles above Vancouver, will be continued, and that before a year is past the finest grade of pulp will be shipped to Great Britain. A sawmill, of about 40,000 feet daily capacity will be erected at once, and will be followed by a sulphide plant of 35 or 40 tons capacity per day. The expenditure will be about \$300,000. When conditions warrant, a paper mill will also be erected. This company has 83,000 acres of limits, which have been surveyed. The whole market has been taken into consideration by the promoters, and there is not the least doubt that the enterprise will be eminently successful.

Hon. R. G. Tatlow, Finance Minister, who got back on Tuesday, brought the news that early in the year English capitalists will be out to personally look over the ground for the Pacific Coast Power and Pulp Company. This concern has been capitalized for £400,000, that amount having been underwritten. The limits are located at Powell Lake, 80 miles north of here, and where there is a grand waterpower.

...

The announcement of Premier McBride at the Pioneers' dinner at Victoria a week ago that at the forthcoming session of the Provincial Legislature the Government was going to bring down a scheme of development of the province, east, west, north and south, is regarded very favorably. The development which has followed as each line of railway has been extended or steamboat line run has been marvellous, and it is reckoned that if each district can have such prosperity why not all the province. It is nothing new to state that for years, for as long as ten decades, settlers have grown gray in the interior waiting for railways or some means of rapid communication. The country is almost perfect, rich in mineral and agricultural resources, and all that is required is transportation facilities. As soon as a line is projected to the interior, a large number of mines will be opened up, coal measures will be developed, and good times should follow. This is a country where machinery will be used very extensively, and if the Premier's scheme is carried out there will be busy seasons all the time.

...

The measures of the Breckenridge & Lund Coal Co., located at Lundbrek, in the Crow's Nest Pass district, are to be opened up on a larger scale. Sufficient shares are being offered at 55c to give funds for the purchase of machinery capable of taking out 500 tons per day. At present the market is only local.

Export of coal is keeping the town of Ladysmith, on Vancouver Island, busy. As many as eleven vessels were loading there last Monday, and it is expected that in January when the contracts made by the Southern Pacific with Australian firms will have expired that the

IRON STEEL and METALS

Close prices to wholesale buyers only.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

COLD WEATHER IS COMING.

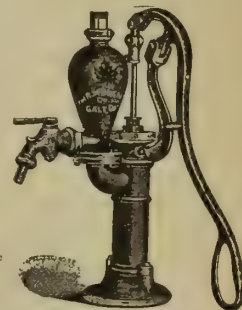
Have you got a line of good Pumps?
If not, you'd better write us about our

STANDARD ANTI-FREEZING PUMP

It's the best there is, and can't freeze if the valve is tripped by raising the handle. It's very simple, and the sale of one should bring you lots of other good business.

Catalog and prices for the asking.

The
R. McDougall Co.,
Limited
Galt, Ont.



"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel
for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

SHEFFIELD, ENG.

Agents for Ontario:

BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

increase in tonnage will be much greater.

There is a reduction of 25c in barbed wires, the recent cut by eastern manufacturers having just come into effect locally.

Moore & Whittington, contractors of Victoria, are to erect a sawmill of 20,000 feet daily capacity.

W. L. Breeze, representing New York and Philadelphia capital, is in the city, and will ship a \$200,000 dredge into the Alsek country in the Spring. He will secure a large number of supplies in Vancouver, orders having been placed with the Vancouver Engineering Works for a considerable amount.

European experts, desirous of reforesting depleted areas with trees of quality and generous growth, have commissioned Mr. M. J. Henry, nurseryman, of Vancouver, to secure 2,500 pounds of seeds of the Douglas fir and the cedar which grow in British Columbia. These will go chiefly to Denmark. The procuring and transportation of the large quantity of young trees requisite would involve too great expense to permit of this process being practical.

Michigan capitalists are negotiating for the purchase of 600 square miles of timber up the coast, this being a direct result of the purchase by the Altland Syndicate. This deal will be one of the biggest in the west.

PITTSBURG METAL MARKETS.

From the Iron Trade Review, Dec. 29, 1904.

THE drouth which threatened to cripple completely the iron and steel plants throughout this district has at last been broken, and furnaces that were compelled to bank have resumed operation, while steel works whose output was greatly curtailed are again operating at their normal capacity.

At a meeting of the nut and bolt association held last week in New York an advance of 5 per cent. was made.

The market has been comparatively quiet during the week and it is doubtful if there will be any considerable buying until after the new year.

Pig Iron—A number of idle stacks in this and the Valley districts that were banked last week have resumed owing to the fall of rain, and pig iron production will materially increase. Whether this will result in an easier market is extremely doubtful, inasmuch as nearly all of the furnaces are behind on deliveries and they will now have an opportunity of catching up. Coke shipments have improved and the furnaces are having shipments brought forward as rapidly as possible in order to accumulate stocks before the extreme cold weather sets in again. Sales of iron during the week have been limited to small lots entirely and quotations remain practically unchanged. A large number of foundries in this district have not covered their requirements for the first half of next year and it is expected that they will appear in the market shortly after the first of the year. We revise quotations as follows:

ON BEHALF OF THE Nicholson File Co. and Ontario Lantern & Lamp Co.

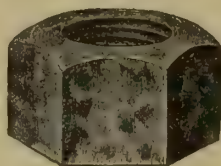
I wish to thank our many customers throughout the Dominion for their business during the past year, and take this opportunity of wishing them

"A Happy and Prosperous New Year."

OUR MOTTO FOR 1905:

GOODS OF EXCELLENT QUALITY. REASONABLE PRICES. PROMPT DELIVERIES.

WALTER GROSE, Selling Agent, MONTREAL.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs.
Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.



Joker



Blizzard

TRAPS FOR RATS AND MICE

Swift as lightning, sure as death and sure death to the animal. Strong, simple, substantial construction. "To get the best trap trade, sell the best traps made."

Write for prices to

J. M. Mast Mfg. Co., Lititz, Penna.

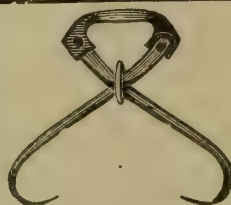
Canadian Ag'ts, C. H. Grenfell & Co., London, Ont.



Snap Shot



Old Nick



Write for Catalogue and Prices.

ICE HARVESTING TOOLS

For Butchers, Dairymen, Farmers, Ice Dealers, etc.

Ice Plows, Saws, Tongs.

Bars, Hooks, Axes, etc.

Robert Donaldson & Sons

30 YOUNG SQUARE, MONTREAL, QUE.

FOR BRITAIN'S MARKETS

hear from Manufacturers of General Hardware, Woodenware, etc., who seek direct "Representation" in its fullest interpretation. Have had 20 years experience amongst the Best British Buyers, and have a business connection which is unequalled. I know exactly their requirements and can satisfy any firm as to my Standing, Abilities, Business Methods and selling organization.

Will be in Canada during January and February next. In the meantime shall be glad to answer enquiries and make appointments in advance. Address in first instance:

WALTER P. NOTCUTT, c/o "Hardware and Metal," Toronto or Montreal.

Bessemer, Valley	\$16 00 to \$16 25
Bessemer, Pittsburg.....	16 85 to 17 10
No. 1 Foundry.....	18 00 to 18 25
No. 2 Foundry.....	17 35 to 17 85
Gray forge, Pittsburg.....	16 50 to 16 85
Chilled basic, Valley.....	15 75 to 16 00
Chilled basic, Pittsburg....	16 60 to 16 85

Steel—Premiums ranging from \$2 to \$2.50 a ton are now being asked on billets and sheet bars, none of the producers quoting the agreed prices for any delivery. Most of the mills are unable to promise delivery in the next two months at any price, while two large independent producers will not quote on business for delivery after March. Agreed prices are as follows: Bessemer

and open-hearth billets, 4x4 in., and slabs up to and including 0.25 carbon, \$21. f.o.b. mill, Pittsburg, with actual freight to points of delivery; 0.26 and including 0.60 carbon, \$1 advance; 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 4x4 in., \$2 advance; sheet and tin bars, \$23; cut bars, \$23.50; forging billets, \$23. Bessemer and open-hearth steel rods are held at \$30.50 to \$31.

Plates—The Pittsburg Coal Co. last week placed an order with the Standard Steel Car Co. for 2,000 steel cars. To fill this order 20,000 tons of plates will be required. Specifications from steel

car plants are unusually heavy and with the large number of cars already booked the outlook is unusually bright. We make the following quotations: Tank plates, 1-4 in. thick, 6 1/4 to 14 in., inclusive, 1.40c f.o.b. mill Pittsburgh; over 14 in. up to 100 in., 1.50c. Extras are as follows per lb.: Flange and boiler steel, 10c; marine, A.B.M.A. and ordinary fire box, 20c; still bottom, 30c; locomotive fire box, 50c; plates over 100 in. up to 110 in. width, not less than 5c per 100 lb. extra; plates 110 in. to 115 in. wide, not less than 10c extra; 115 to 120 in., 15c extra; plates 120 in. to 125 in. wide, not less than 25c extra; plates 125 in. to 130 in., not less than 50c extra; plates 130 in. wide, not less than \$1 extra; plates 3-16 in. thick, \$2 extra; gauges 7 and 8, \$3 extra; No. 9, \$5 extra. Five cents extra for less than carloads. Terms net cash in 30 days, and for all points of delivery in the United States except the Pacific coast.

Bars—Bar iron is now on the basis of 1.65c Youngstown, or 1.69 3/4c Pittsburgh. Even at these prices mills are not anxious to book business for future delivery, and despite the \$6 a ton difference between iron and steel bars, the iron mills are having no trouble in securing sufficient business to insure full operation. We make the following quotations: Bar iron, 1.65c to 1.69 3/4c Pittsburgh; hoops, 1.55c, and bands, 1.40c both taking bar extras. Bessemer steel bars, 1.40c; open-hearth steel bars, 1.40c; plow and cultivator beams, 1.40c net; channels, angles, zees and tees, under 3 in., 1.50c. The following differentials are maintained on steel: Less than 2,000 lb. of a size and not less than 1,000 lb., 10 cents advance; less than 1,000 lb. of a size, 30 cents advance.

Sheets—On Thursday, December 22, the American Sheet & Tin Plate Co. announced an advance of \$2 on black sheets. Galvanized sheets were not changed as prices were only recently advanced in that line. Advances on corrugated roofing, amounting to 5 cents on painted and 10 cents on galvanized, were also announced. We revise quotations on black sheets in carload lots as follows: No. 30, 2.70c; No. 29, 2.60c; No. 28, 2.30c; No. 27, 2.20c; No. 25-26, 2.15c; Nos. 23-24, 2.10c; Nos. 18-20, 2.05c; No. 16, 2c; Nos. 12-14, 1.95c; No. 9, 1.90c; No. 8, 1.85c. Galvanized: No. 30, 4.25c; No. 29, 3.75c; No. 28, 3.35c; No. 27, 3.15c; Nos. 25-26, 2.95c; Nos. 23-24, 2.75c; Nos. 18-20, 2.60c; No. 16, 2.45c.

Tin Plate—Tin plate was advanced 10 cents a box on Thursday, December 22, going into effect immediately. We quote 100-lb. coke plates at \$3.55 or \$3.50 net per box, f.o.b. mill Pittsburgh. The net price is now almost invariably quoted, the rebate plan no longer being in vogue.

Wire and Wire Nails—Demand for wire products continues heavy and an advance in prices is looked for next week. Manufacturers of cut nails report an active market. We make the following quotations: Wire nails, jobbers' carload lots, \$1.75; retailers' carloads, \$1.80; and less than carloads, \$1.90; painted barb wire, \$1.90 to jobbers in

carloads; retailers' carloads, \$1.95 and less than carloads, \$2.05, with 30 cents for galvanizing. Annealed smooth fence wire is held at \$1.60, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburgh, 60 days, with 2 per cent. discount for cash in ten days. Iron cut nails are held at \$1.85 Pittsburgh, and steel at \$1.75.

Old Material—Little material is moving and quotations remain practically unchanged. Last week considerable low phosphorus material was purchased by the steel casting plants in this vicinity at a price slightly under \$20. We make the following quotations, gross tons: Heavy melting stock, \$16.50 to \$17; low phosphorus stock, \$20 to \$20.50; No. 1 cast scrap, \$15 to \$15.50; cast iron borings, \$10.50 to \$11; No. 1 wrought, \$17.50 to \$18, net tons, re-rolling rails, \$16.50 to \$17.

Coke—Now that the water supply in the Connellsville coke region has been replenished additional ovens are being fired and the indications are that not more than 2,000 ovens will be idle the first of the year. The movement of coke from the ovens has been unusually heavy in the last few days and blast furnaces are endeavoring to accumulate stocks as long as shipments remain unhampered. Furnace coke for delivery the first half of next year has been selling at \$2.40, while foundry is held at \$2.75 to \$3. During the week ending December 17, the production of the upper region amounted to 232,889 tons, while the lower region produced 68,878 tons. In the two regions less than 4,500 ovens were idle.

A WINNIPEG PRESENTATION.

FOR two years the Winnipeg branch of the Fairbanks Company has been under the management of F. R. Newman. On Friday the 23rd inst., the employees of the Winnipeg house presented Mr. Newman with a diamond and sapphire pin as a mark of the high esteem in which he is held. The presentation was made by Miss Edith Scott, while the sentiments of the gathering towards their chief were voiced by P. D. McLaren, head of the plumbing department. Mr. Newman made a fitting response, expressing his appreciation of the good will of his staff.

There are few managers so popular and efficient as F. R. Newman and his popularity is easily understood by all who have any acquaintance with him. He is a son of T. H. Newman of Caverhill, Learmont & Co., Montreal.

PERSONAL AND TRADE NOTES.

The Canadian Iron and Foundry Co., Hamilton, presented each of its one hundred and twenty-five employees with a Christmas turkey.

Mr. D. Lorne McGibbon, general manager of the Canadian Rubber Co., Montreal, was a guest at the Mariaggi Hotel, Winnipeg, on December 22.

The Humphries Mfg. Co., of Mansfield, Ohio, manufacturers of pumps, enamelware and brass goods, intend establishing a branch at Sarnia, Ont.



Our Sheet Metal Fronts

Offer you splendid improvement, at small cost, for any style of building. We make them complete, to suit any sized or shaped structure—the entire metal finish including door and window caps, cornices, etc.—in a great variety of styles. They give a very handsome effect, and enduring, practical satisfaction. We give estimates if you send measurements and outline of the building. Think it over.

Metallic Roofing Co.,
Limited,
Wholesale Manufacturers,
Toronto, Canada.

Canadian Brass Foundry Co., of St. Thomas, presented to each of their employees at Christmas, a cheque with the face value ranging from fifteen to twenty-five dollars.

On Saturday evening, December 23rd, the employees of the Russill Hardware Co., Toronto, presented Mr. Frank Russill, their manager, with an address and a handsome gold watch.

The employees of the Cockshutt Plow Co., Brantford, presented Mr. Harry Cockshutt, the managing director, on Christmas eve with a handsome gold mounted cane suitably inscribed.

Ham & Nott, manufacturers of refrigerators, Brantford, presented to those employees who had been in their employ for ten years or more, a handsome easy chair as a Christmas gift.

Owing to the delay of his opponent in making the statutory declaration, Mr. C. H. Waterous, president of the Waterous Engine Works, Brantford, has been elected by acclamation as Mayor of that city for 1905.

The Eureka and Paragon brands of cotton rubber lined fire hose, manufactured by the Winnipeg Rubber Co., of Winnipeg, have been awarded the gold medal for superiority at the St. Louis World's Fair.

Mr. George McCormick, manager of the McCormick Mfg. Co., London, has sent a check for \$50 to Fire Chief Clark. The money is a Christmas box for the men, for the good work done at the fire on December 21st.

The travelers of the Massey-Harris Co., with headquarters in London, took advantage of the Christmas season to present Mr. R. B. Smith, manager of the London district of the company, with a beautiful morocco-bound case containing a set of military brushes. The presentation was accompanied by an illuminated address.

(Market quotations corrected by telegraph up till 12 a.m. Friday, Dec. 30, 1904.)

32

Building paper:	
Anchor, plain	65c.
" tarred	70c.
Pure fibre, plain	67½c.
" tarred	80c.
Ammunition, cartridges, Dominion R.F.	
50 and 5 p.c.	
Dominion, C.F., pistol	30 p.c.
" military	15 p.c.
Ammunition, cartridges, American R.F.	
33½ p.c.	
C.F. pistol	5 p.c.
C.F. military	10 p.c. advance.
Loaded shells:	
Eley's and Kynoch's soft, 12 gauge	
black	15 00
chilled, 12 gauge	16 00
soft, 10 gauge	18 00
chilled, 10 gauge	19 00
Shot, Ordinary, per 100 lb	6 25
Chilled	6 75
Powder, F.F., keg, Hamilton	4 75
F.F.G., Dupont's	5 00
Tinware, pressed, retinned.	
70 and 10 p.c.	
plain	75 and 2½ p.c.
" pieced	30 p.c.
Japanned ware	37½ p.c.
Enamelled ware, white	45 p.c.
" Famous	50 p.c.
" Imperial	50 and 10 p.c.
Green Wire Cloth	1 55

PETROLEUM.

Silver Star, per gal	22½c.
Sunlight	23½c.
Eocene	25½c.
Pennoline	26c.
Crystal Spray	25c.
Silver Light	23c.
(In barrels f.o.b. Winnipeg.)	

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap	5
Copper (heavy)	8½c. per lb.
Yellow brass (heavy)	7½c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead	2c. to 2½c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead (pure)	\$5 00 to \$5 50
Putty in bladder, 2½ lb. in 100 lbs. keg. o 2½ o 02½	
Turpentine, pure in barrels	\$ 87
Less than barrel lots	0 92
Linseed oil, raw	0 55
Boiled	0 58
Lubricating oils, heavy castor machine	0 26½
" extra engine	0 27
" dynamo	0 38
" back	0 22
" cylinder	\$0 50 to 0 80
(as to quality)	
Harness oil	0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00½
" 2nd pressure	1 09½

WINDOW GLASS.

16-oz. O.G., single, in 50-ft. boxes—	
16 to 25 united inches	\$2 25
26 to 40 "	2 50
16-oz. O.G., single, in 100-ft. cases—	
16 to 25 united inches	4 00
26 to 40 "	4 25
41 to 50 "	4 75
51 to 60 "	5 25
61 to 70 "	5 75
21-oz. C.S., double, in 100-ft. cases—	
26 to 40 united inches	6 30
41 to 50 "	7 35
51 to 60 "	8 40
61 to 70 "	9 45
71 to 80 "	10 50
81 to 85 "	11 55
86 to 90 "	12 60
91 to 95 "	14 70
96 to 100 "	17 35

CONTRACTS AWARDED.

The Dominion Bridge Co., of Montreal has been awarded the contract to erect a new lift lock at Kirkfield, on the Trent canal.

This lock is to lift a distance of fifty feet and is to be one of the most important works of the kind on the continent. This is the second lock of the character to be constructed by the Dominion Bridge Co., the former one being near Peterboro, Ont.

GILBERTSON'S**COMET**

Agent: ALEXANDER GIBB, Montreal.

**Galvanized Sheets**

are of a quality inferior to none. Price by no means the highest.

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.



294 Broadway, New York City

Canadian Sample Room: 215 Coristine Bldg., Montreal, Can.
ALLEN C. JENKING, Canadian Manager

We wish you a Happy New Year**STERNE'S ASBESTOS CEMENT**

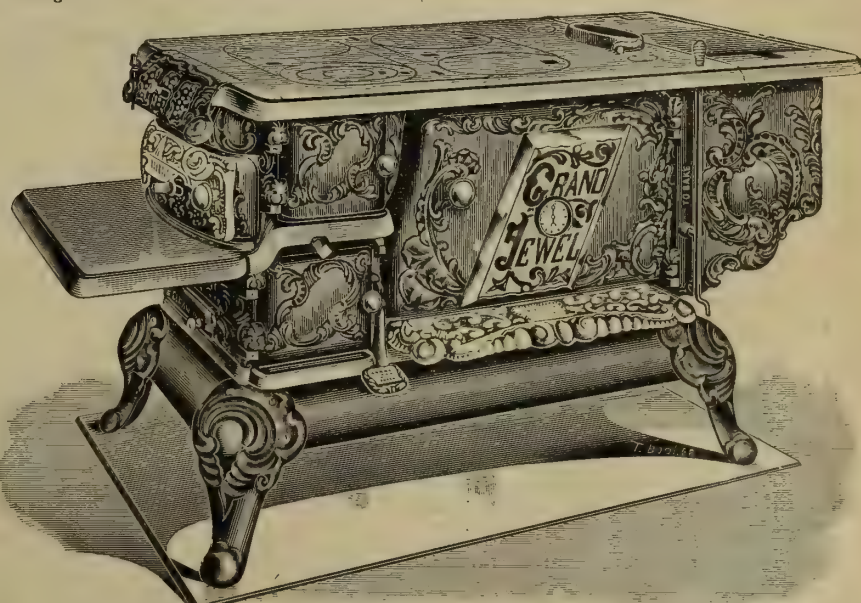
for Stoves and Furnaces.

G. F. STERNE & SON, Sole Makers, Brantford, Ont.

J. H. HANSON, 422 St. Paul St., MONTREAL, Eastern Agent.

The Grand Jewel Coal Cook Stove

is a new stove of the very highest class, specially adapted for burning Hard or Soft Coal; can also be used for burning Wood

**Two Sizes—Square**

Duplex Grate of improved pattern. No space left between grate and fire-box linings, so that no ashes or cinders can pass between or accumulate, so as to interfere with its easy working. One movement of the crank cuts out the dead ashes and cinders and drops them into ash pan.

The Duplex Grate when reversed forms a perfect WOOD fire bottom, and with all the coal linings in position 17 inch wood can be used. Special Wood Linings can be supplied to admit wood 24 inches long.

Manitoba
Depot

MERRICK, ANDERSON & CO.,**Two Sizes—with Tank**

The Oven is our standard one piece Sheet Steel Oven, same as our Grand Jewel Wood Cook, which has been so wonderfully popular and successful. This Oven will never warp nor crack. With a Steel Oven much less fuel is expended in getting up a baking heat, and less required to keep the stove running.

The Oven is well ventilated.

Oven Door Thermometer.

Water Front for either size supplied when ordered

Winnipeg

PAINT, OIL AND BRUSH TRADES

The Paint Trade During 1904.

WHILE the past year has not been a particularly good one in paint and oil lines, yet manufacturers have found little cause for complaint. Sales have kept up fairly well, and in some instances have exceeded those of previous years. However, the prevalence of low prices has been felt adversely. The outlook for the new year is bright, and the trade look forward to an increased turnover and better prices. Orders so far booked by the travelers have been most encouraging. Statements from the following manufacturers will be read with interest.

SHERWIN-WILLIAMS CO., MONTREAL.

While the trade in 1904 was not as good as anticipated, yet with this firm the sales were greater than in the previous year. As far as 1905 is concerned, prospects look very bright. The traveling representatives have been on the road since early in November for Spring business. Orders that have been received from them from all parts of Canada are larger and better than ever. Reports from all representatives are of the most encouraging nature, and it is anticipated that 1905 will beat all previous records on the part of the paint and varnish business.

A. RAMSAY & SON CO., MONTREAL.

The demand for paints, oils, glass, etc., throughout the year was good, but prices were low and trade was continued throughout on a falling market. The outlook for 1905 is bright. Prices in the majority of leading lines have touched bottom, and an upward tendency is probable with a good demand.

THE CANADA PAINT CO., LTD., MONTREAL.

The paint and color trade for the past year has not been altogether satisfactory, on account of the severe climatic conditions early in the season and the ridiculous cutting upon white lead, which is still, notwithstanding the enormous increase in the output of liquid paints, an important factor in the sales of the leading manufacturers. 1905 points to brighter prospects, as all lead products are stiffening in price very materially. This naturally tends to steady the market and induce more healthy sales.

Briefly, the manufacturers may be said to be preparing for a good brisk trade.

In varnishes, competition continues very keen, and extreme caution will

have to be observed or it will be found that this branch of the paint business is being overdone.

Paris Green Higher.

Prices of paris green this year rule considerably higher than last year. This strengthening is due very considerably to advances in the price of the raw materials used in the manufacture of paris green. At present the market on raw materials is very firm, with a strong upward tendency.

Six Months' Ahead!

Although the "Doryphora Decemlineata," commonly known as the potato bug, does not, usually, make his appearance before May or June, the Canada Paint Co. have an inflexible rule which says "Six months' ahead," that is to say, everything in their factory must be made six months in advance of actual requirements. This naturally puts their stock well in hand and prevents vexatious "waits" on the part of

their customers. Prospective buyers of paris green can have a case containing one hundred pounds, or a carload, shipped immediately, or they may order for forward delivery, as the Canada Paint Co. are manufacturing enough to supply the whole Dominion. Copper is stiffening and early bookings are recommended.

Kerosene in Japan.

Kerosene is largely used as an insecticide in Japan. To protect rice plantations against the ravages of animal pests, the Japanese formerly made use of camphor, but since 1895, when the producers of camphor decided to increase the price, the owners of the plantations started to use ordinary kerosene for the purpose. Tests which were conducted gave results which entirely justified the employment of kerosene. That is one reason why the consumption of kerosene in Japan has considerably increased.

A good and profitable resolution for the new year is to decide on taking the agency for Hollywood Paints and Imperial Specialties for 1905.

New and attractive Advertising Matter.

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED,

TO THE VARNISH BUYER

the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

BERRY BROTHERS, Limited

VARNISH MANUFACTURERS

WALKERVILLE, ONT.

Write for our 100 page illustrated catalogue. Every dealer should have a copy for reference.

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.

AMERICAN WINDOW GLASS CO. Pittsburg, Pa.

are now prepared to do business in Canada in

Machine Made Glass

for prompt and later deliveries. Good
Quality Packing and Fair Treatment—our
motto.

OUR BUSINESS IS NOT DELAYED BY STRIKES

WRITE US FOR QUOTATIONS.

GERALD LOMER,
Sole Canadian Representative, MONTREAL

Paint and Oil Markets

Quebec.

Office of Hardware and Metal,
232 McGill Street.
Montreal, Dec. 30, 1904.

ONE of the most prominent features of the paint and oil market this week is the active preparation that is being made for the coming year. The past year has not been all that could be desired but it is hoped and fully expected that this will be more than counterbalanced by the volume of trade next year.

Already large orders have been received for Paris green. It seems that stocks throughout the country were entirely depleted hence the big demand. Quotations for the coming year are given on both English and Canadian Paris green this week.

Turpentine—Single barrels, 78c per gallon; 2 to 4 barrels, 77c per gallon. For smaller quantities than barrels 5c extra per gallon is charged. Standard gallon is 8.6 lbs. The above prices are net thirty days, for longer terms prices are higher.

Linseed Oil—Raw, 1 to 4 barrels, 44c; 5 to 9 barrels, 43c; boiled, 1 to 4 barrels, 47c; 5 to 9 barrels 46c; delivered in Ontario between Montreal and Oshaway at 2c per gallon in advance.

Ground White Lead—Best brands Government standards, \$4.60 to \$4.75; No. 1, \$4.35 to \$4.50; No. 2, \$4.10 to \$4.25; No. 3, \$3.77 1-2 to \$3.87 1-2; No. 4, \$3.40 to \$3.50, all f.o.b. Montreal.

Dry White Lead—\$4.50 in casks, and in kegs, \$4.75.

Dry White Zinc—Pure dry in casks, 7c, in 100 lb kegs, 7 1-2c; No. 1 zinc, in casks, 6c, in 100 lb kegs, 6 1-2c.

White Zinc (ground in oil)—Pure, 25-lb irons, 7 1-4c; No. 1, 6 1-4c; No. 2, 5 1-4c.

Putty—Bulk in barrels, \$1.50; in 25-lb irons, loose, \$1.80; in tins, \$1.90; bladdered putty in barrels, \$1.75.

Orange Mineral—Casks, 7 1-4c; 100-lb kegs, 7 1-2c; smaller quantities, 8 1-2c.

Red Lead—Genuine red lead in casks, \$4.50 in 100-lb kegs, \$4.75; in less quantities at the rate of \$5.75 per 100 lbs; No. 1 red lead, casks, \$4.25; kegs, \$4.75, and smaller quantities, \$5.50.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in whole-sale lots, and 1-2c additional for small lots.

Litharge—Ground, in casks, 5c; in less quantities, 5 3-4c; flake litharge, casks, \$5.50; smaller quantities, \$6 per 100 lbs.

Paris Green—Pure English Paris green, petroleum barrels, 15 1-4c; arsenic kegs, 15 1-2c; 50 and 100 lb. drums, 16c; 25-lb drums, 16 1-2c; one pound paper boxes, 17c; one pound tins, 18c; one-half pound paper boxes, 19c; one

half pound tins, 20c. Terms, 2 per cent. off thirty days, or ninety days net from date of shipment. Government standard pure Canadian Paris green, barrels, 13 1-4c; arsenic kegs, 13c; 50 and 100 lb drums, 14c; 25 lb drums, 14 1-2c; one pound packages, 15c; half pound packages, 17c; one pound tins, 16c. Terms, 2 per cent. discount for cash in 30 days or 90 days net.

Ontario.

Office of Hardware and Metal,
10 Front Street East,
Toronto Dec. 30, 1904.

THIS branch of business, like many others, has been neglected during the holiday season. Wholesale jobbers and manufacturers have withdrawn their travelers from the road, and the absence of the traveler has made the retail merchant careless about finding the weak spots in his stock in trade with the result that very few orders were booked during the week. After the first of the year, when travelers go on the road to book orders for mixed paints, a brightening up of the trade is expected. Turpentine has an inclination to advance at the manufacturing points but owing to the slight demand on the local market no advance is likely to take place. Trade in linseed oil is quiet. A better trade is expected after the first of the year when the manufacturers start to make mixed paints. Some jobbers are inclined this week to advance the price of red lead and quote an advance of 25c on genuine and 50c on No. 1. This evidence was not very substantial and does not warrant us in making any change in our quotations which appear the same as last week.

The present anticipation is that the glass strike will be maintained longer than was at first expected and prices in consequence will remain high.

Owing to the firm conditions of white lead, more No. 1 is being sold now than a few months ago.

White Lead—Ex-Toronto, pure white lead, \$4.75; No. 1, \$4.37 1-2; No. 2, \$4 No. 3, \$3.62 1-2; No. 4, \$3.35 in packages of 25 lbs and upwards; 1-2c per lb extra will be changed for 12 1-2 lb packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs, \$4.25; ditto, in kegs of 100 lbs, \$4.50; No. 1, in casks of 500 lbs, \$3.75 to \$4; ditto in kegs of 100 lbs, \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs; Gilders' whiting, 75c.

Shellac—Pure orange in barrels, \$2.75 to \$3; white, \$2.85 to \$3.10 per barrel; No. 1 (orange), \$2.25.

Linseed Oil—Our quotation is: Raw, 1 to 4 barrels, 44c; boiled, 47c; 5 to 9 barrels, raw, 43c; boiled, 46c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Another quotation is: Raw, 1 to 4 barrels, 45c; boiled, 48c; 5 to 9 barrels, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, 2 per cent. off 30 days; net 30 days to outside points. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 75c; 2 to 4 bbls, 74c, Toronto; 5 bbls and over f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls, 77c; 2 to 4 bbls, 76c, ex Toronto; 5 bbls and over f.o.b. point of shipment, 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c,

Dealers in Paints and Painters' Supplies.

Have you ordered your season's supply of Church's Cold Water

ALABASTINE

for 1905? "Do it now" and insure having good assortment when season opens.

Alabastine is time tried and time tested. Is advertised and in demand. Sells on its own merits, and gives that degree of satisfaction as will impel a customer to visit your store again when in want of reliable goods in wall-coating and other lines as well.

Alabastine is a stone-like cement that hardens with age. Beware of imitations—cold water preparations under whatever name or claims. The cold water process is patented.

Jobbers everywhere sell Alabastine. Write us for particulars. Address

The Alabastine Co., Limited, Paris, Ont.

New Purposes for the New Year.

Let us recommend to you

NEW ERA PAINTS

High grade in every particular. Made from
Pure White Lead, Oxide of Zinc, Pure Linseed Oil, Turpen-
tine and Turpentine Japan Dryers.

NEW ERA PAINTS

will cover more surface, last longer, hold their color
better, stand the changes of the weather, and give a
more brilliant finish than any other home paint you
can buy.

BEAUTY. DURABILITY. ECONOMY.

STANDARD PAINT & VARNISH CO., Limited, WINDSOR,
ONTARIO.

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

We have about ten tons of No. 6 galv. wire which
we offer at a snap, Quality guaranteed.

The Oshawa Wire Fence Co.
Limited.
OSHAWA.

BRITISH BUSINESS CHANCES.

Firms desirous of getting into communication
with British manufacturers or merchants, or who
wish to buy British goods on the best possible
terms, or who are willing to become agents for
British manufacturers, are invited to send partic-
ulars of their requirements for

FREE INSERTION

in "Commercial Intelligence," to the Editor
'JELL'S COMMERCIAL INTELLIGENCE,'
Temple House, Tallis St., Temple Avenue,
London, E.C.

"Commercial Intelligence" circulates all over
the United Kingdom amongst the best firms. Firm
communicating should give reference as to bona
fides.

N.B.—A free specimen copy will be sent on re-
ceipt of a post card.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.
HIGH-GRADE FURNITURE and HOUSE VARNISHES.
MONTREAL.

GLUES AGAIN

Our IMITATION FRENCH MEDAL
GLUES are of such high class
and are so suitable for Export that we would like to quote you. Export trade
in this line is growing rapidly, and we pack in casks or cases as preferred.
Quality unrivalled.

GROVE CHEMICAL CO., LTD., Appley Bridge, Lancashire, Eng.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited
TORONTO MONTREAL LONDON
OTTAWA WINNIPEG



WE WISH YOU

**A Very Happy
and Prosperous
New Year.**

P. D. DODS & CO., Montreal Toronto Vancouver

SPECIAL TO THE TRADE

The Canada Paint Company

take pleasure in stating that with the enlarged facilities afforded by their new Color House they are now manufacturing for the coming season sufficient Pure Paris Green to supply the entire wants of the Dominion. Dealers will, therefore, be saved the annoyance of importing, the money will be kept in Canada and the quality will, as usual, be pure, uniform and not excelled by any other.

NOTE

The largest buyer of Paris Green in Canada says: "We are tired of importing. In future, we will buy your (The Canada Paint Company's) Paris Green."

and 10 gallon packages 80c will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Ordinary, bladders in barrels, \$1.65; pure linseed oil, \$2 to \$2.10; bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2. per barrel.

Liquid Paints—Pure, \$1.20 to \$1.35 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 8 to 8 1-2c per lb and 9c for single tins.

Glass—See current quotations at the end of this issue.

Petroleum.

Refined—Trade is quiet. On account of it being the dull season a decline is noted. Our quotations are: Canadian water white, 17c; Canadian prime white, 15 1-2c; American water white, 17 1-2c ex warehouse.

Crude—Prices continue unchanged. Our quotations are as follows: Pennsylvania, \$1.55; Corning, \$1.22; Newcastle, \$1.47; North Lima, \$1.04; Tiona, \$1.70; South Lima, 99c; Whitehouse, 96c; Somerset, 96c; Indiana, 99c; Canadian, \$1.47.

Window Glass.

MONTREAL.

Latest advices from the glass centres of Belgium state that the strike among the glass workers is still on, and likely to continue for some time. This places a scarcity in the near future beyond the question of a doubt and it is only a matter of a short time until it will be felt in Canada. Prices have as yet met with no change, but attention is directed to a correction made in price of fourth break double diamond and following quotations. We quote as follows: first break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet, \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$10; fifth do., \$11.50; sixth do., \$12.50; seventh do., \$14; eighth do., \$16.50; ninth do., \$18; tenth do., \$20; eleventh do., \$24, and twelfth do., \$28.50.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent. discount 30 days.

BUSINESS CHANGES.

ONTARIO.

Wm. Bray, blacksmith, Huntsville, has sold to H. Knibbs.

Hughes & Cook have started in business as harness merchants, Watford.

J. Taylor, planing mill owner, Chatsworth, has sold to Rhodes & Galbraith.

McCormick Mfg. Co., London, suffered slight damage to premises by fire on Dec. 21.

Dymont-Baker Lumber Co., London, suffered slight damage to mill by fire on Dec. 19.

The mills owned by the Farmers' Milling Co., Feversham, were totally destroyed by fire.

Wallaceburg Electric Light Co., Wallaceburg, have been succeeded by the Premier Electric Light & Power Co.

The stock of the estate of W. T. A. Fishleigh, hardware merchant, Wingham, was sold by auction on Dec. 30.

QUEBEC.

Keiffer Bros., machinists, Montreal, have dissolved partnership.

E. David, contractor, Longueuil has received a demand of assignment.

The assets of A. Bergeron, grocer and hardware merchant, Iberville, have been sold.

Mrs. C. E. Brodeur has registered as C. E. Brodeur & Co., plumbers, St. Hyacinthe.

Laurent Breault & Cleo Breault have registered under the style of C. Breault & Cie., lumber merchants, Marston.

MANITOBA AND N.W.T.

A. Kennedy, harness merchant, Lacombe, has been sold to W. L. Elliott.

The business of Saunders & Anger, pump manufacturers, Carman, is advertised for sale.

The business of F. G. Elliott, hardware merchant, Gainsboro, is advertised for sale.

Wm. P. Puddicombe, hardware merchant, Westwood, has sold to J. Foreman, Alexander.

The Canada Territories Corporation, Limited, Morris, dealers in hardware, implements and harness, have sold to Jos. M. Hackney & Co.

NEW BRUNSWICK.

The wood working factory owned by Wm. Currie & Co., Campbellton, has been burned.

NOVA SCOTIA.

Acadia Power Co., manufacturers, Halifax, have suffered loss to premises by explosion.

BRITISH COLUMBIA.

E. A. Gardner, saw mill owner, Dannville, is dead.

Blackmore & Morgan, plumbers, Vancouver, have dissolved partnership.

MACHINERY

Machinery Echoes and Prospects.

IN viewing the machinery trade in Canada for the year that is just past it is necessary to have a look at the conditions that prevailed at the opening of the year. The beginning of the year saw one of the severest Winters that the country has ever experienced. Storms of unusual violence, combined with a great depth of snow, exerted their influence towards the general demoralizing of traffic. The comparatively late Spring hindered industrial activity. Iron and steel markets were weak and of uncertain tone. In fact there was an actual depression in these, and the iron industries of the country to which Canadians had looked with pride were not in a flourishing condition. Several contemplated enterprises were withdrawn owing to the general conditions.

In spite of an uneasy feeling in industrial circles, there were many of broad gauge and keen foresight who felt that, instead of a depression, a greater activity than before was near at hand. They realized that instead of going backward in that direction we were on the verge of a great forward movement in manufacturing circles. As is well known, the Summer saw several large machinery firms start, and not a few important manufactories built. It saw, too, the "dumping clause" go into effect, which even with its inherent defects put a complete stop to the dumping of machinery and other products into Canada, with a consequent stimulus to home manufacture. Later the iron and steel markets became firmer with an increase in activity that was highly satisfactory. This had a good effect on the machinery market for, without advancing prices to any extent, it brought about a quickening in manufactories with a resultant demand for machinery, machine tools, tool steel, etc.

The announcement that a new national railway was being undertaken increased prospects greatly, and that, together with not a few large industrial establishments in contemplation, has given a satisfactory outlook to the machinery trade for 1905.

Opinions gathered from several ma-

chinery manufacturers and dealers will be found of interest.

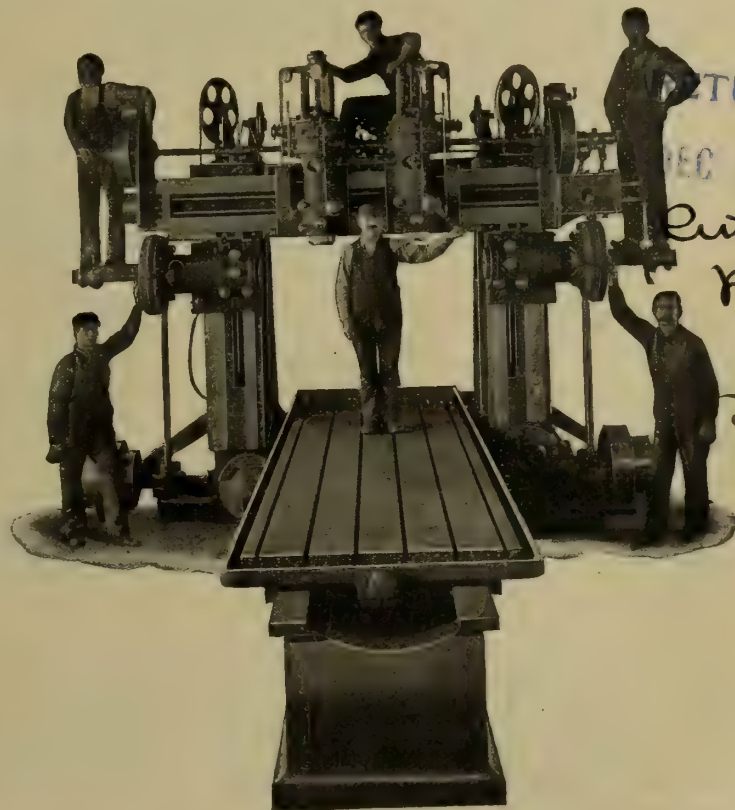
FAIRBANKS CO., MONTREAL.

Last year a large amount of industrial work was undertaken in the country. Paper mills and steel plants in the lower provinces called for a large amount of machinery. This year very few plants have gone up. Leaving out the business arising from the extra industrial undertakings the amount of trade has been growing steadily over previous years. Everything points to an increase in construction work next year. Some of the pulp mills are putting in paper mills in addition, as it is no longer pos-

low stage within the year, it is by no means a discouraging sign. The outlook for 1905 is unusually bright. The demand for fuel heaters was better than usual, and a big business was done, while the jobbing trade was good.

Heavy Milling Machine.

The illustration shown herewith is a view of one of the heavy milling machines manufactured by the Ingersoll Milling Machine Co., Rockford, Ill., and its massiveness is at once discernable in comparing it with the workmen. There are various types of these machines manufactured, including horizon-



63-inch Four-Head Milling Machine.

sible to manufacture pulp alone. Everyone is looking forward to the Grand Trunk Pacific, which is going to bring directly and indirectly a large amount of business to Montreal.

LAWRIE ENGINE CO., MONTREAL.

The engine business has fallen off somewhat during the year, but in view of the general conditions, and in view of the fact that metal trades reached a

tal spindles, double vertical spindles, three vertical spindles, or four head machines, and these are in use in most of the large manufacturing shops in the United States and other countries. Engine cylinders, or dynamo frames, are easily handled on these machines, and the work done is of a high order. It has been frequently said that the milling machine is more adapted for

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roughing work and not for finishing, but with these machines it has been proven that the work comes off as nearly accurate as it would come off any machine of any time, and in a great deal less time than the same pieces would come off the planer.

MACHINERY MARKETS. Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Dec. 29, 1904.

FOR the last week in the year, a time when little business is expected in any line, the machinery trade is in a very satisfactory condition. Orders have been fewer recently, but have increased within the past week. There is less movement in tools than there was two months ago, but for the season business may be said to be brisk. There are more orders in sight than ever before at this time of the year, and the announcement recently that the Canada Car Co. were about to place orders for their enormous equipment caused some excitement in machinery circles. In another column will be found a list of the machine tools and apparatus that will be required by this establishment and it is lengthy enough to warrant assurance on the part of machinery dealers of a share of it at least. Another satisfactory feature of the market is the fact that shipments are much easier and in view of the large demand well completed stocks avoid the annoyance of delay necessary when conditions are otherwise. Inquiries are much more numerous than usual and collections are said to be fairly good.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East.
Toronto, Dec. 30, 1904.

BUSINESS has necessarily been quiet during the past week, owing to the holidays and to the fact that the travelers have been off their routes. Notwithstanding there is a firm undertone to the market, and the new year will witness considerable trading.

Dealers in reviewing the past year speak of it as having been a good one, and they look forward to 1905 with the expectation that it will prove an even better year. The development of the country will ensure a steady demand for all kinds of machinery through the coming months.

At present the demand is of a general nature, and cannot be said to centre on any particular lines. Machine tools, engines and boilers, wood working machinery and electrical machinery are all being asked for.

LARGE MACHINERY REQUIREMENT.

READERS of the machinery department are already well aware of the large industrial works now in course of erection at St. Henri, Montreal, and it will be of interest to machinery firms to get a list of machinery required for equipment, of which as yet but a small quantity has been ordered. This list was given to Hardware and Metal by the president of the company.

MACHINE SHOP.

One 36-inch by 17-foot engine lathe, 10 feet between centres; one 24-inch by 10-foot turret lathe, one 36x36 inch by 10-foot planer, one No. 4 Universal milling machine, one 18-inch by 10-foot engine lathe, taper attachment; one 36-inch boring mill; one 66-inch radial drill press, one 18-inch slotter, one 24-inch shaper, one 32-inch drill press, one six-spindle nut tapper, geared; one wet tool grinder, 34-inch stone; one double stand emery wheel, six 6-inch bulldog vises, miscellaneous tools, shafting, hangers, couplings, etc.; belting and lacing, one 40 horsepower three-phase induction motor.

FORGE AND SMITH SHOPS.

One 7½-ton traveling crane, one 2000-pound double frame steam hammer, one 1500, one 800 and one 600 pound steam drop hammer; one 300-pound single frame steam hammer, one 100 and two 80-pound helve hammers, one 1½, two 2½ and one 4-inch forging machines; three 1½-inch bolt headers, one brake lever rolls, one 2½-inch bar shear, guillotine frame; one single head punch or shear, throat 22 inches; one double head punch and shear, throat 18 inches; one single head punch or shear, throat 15 inches; one double head punch and shear, throat 16 inches; one horizontal punch, throat depth 12 inches; one four-spindle brake lever multiple drill; one 2-inch eye bolt bender, one bolt pointer, ½ to 2 inch bolts; one ten-spindle multiple drill for brake pins and bolts, 7-16-inch holes; one 2½-inch double head threading machine, two 1½-inch double head threading machines, two 24-inch and one 36-inch Aurora drill presses, one single milling machine for key ways No. 1, one power bulldozer, capable of bending arch bars and yokes; one small bulldozer, 24-inch stroke; two air tables, two steel pressure blowers, two six-spindle arch bar drills, one large furnace, stack 30 inches by 60 feet, for 2000-pound hammer; one large furnace for arch bars, 18 small heating furnaces, one chain making equipment, consisting of one winder and cutter, five foot hammers and furnaces; three blacksmith forges, three anvils, miscellaneous tools, steam piping, valves, tracks, tie spikes, shafting,

hangers, couplings, pulleys, belting and lacing, etc.

TRUCK AND BOLSTER, WHEEL AND AXLE SHOPS.

Ten pneumatic rivet hammers, three pneumatic reamers, six double head axle lathes, No. 3; four 48-inch boring mills, one No. 2 hydrostatic wheel press, one double stand emery grinder, 16-inch wheels; two rivet furnaces, miscellaneous tools, shafting, hangers, couplings, pulleys, belting and lacing, hoists; one 75 horsepower three-phase induction motor.

PIPE AND AIR BRAKE SHOPS.

One power pipe cutter for 8-inch pipe, two No. 2A pipe vises, ½ to 4-inches; one six-inch Prentiss vise, one large cutter, stock and dies, 1 to 3 inch pipe; one small cutter, stock and dies, ½ to 1½ inch pipe; one pneumatic pipe bending machine, two power pipe threading machines, ½ to 2 inch; miscellaneous tools, shafting, hangers, pulleys, belting and lacing; one 7½ horsepower three-phase induction motor.

PLANING MILL.

One 7½-ton electric traveling crane, two timber planers, 20x14 inches thick, one planer and matcher, 16-inch; two planers and matchers, 10-inch; three swing saws, 18 inches 7 feet drop of frame; two swing saws, 24 inches drop of frame; one 32-inch cut off saw, automatic, 30-inch stroke; one sliding spindle, double cut off saw, 12-foot bed, 24-inch saw; one brace cut off saw, one 36-inch cut off saw, 32-inch stroke; one outside molding machine, 12-inch; one self feed rip saw, 36-inch saws; two self feed rip saws, 70x45 inch table; one heavy end tenoner, 30-inch saws; one heavy car tenoner, single with saw; one light car tenoner, one vertical sill tenoner, two horizontal boring machines, four-spindle; two vertical boring machines, six-spindle; one vertical single spindle boring machine, two horizontal mortisers, single hollow chisel; one gainer, No. 3 combination, with vertical mortiser, 40-foot travel table; one universal wood worker, without boring table; one 36-inch band saw, 20-foot saw; one extra heavy double spindle shaper, one saw filer, automatic cut-off for circular saws; one band saw setting and filing machine, one automatic 32-inch knife grinder, one emery wheel stand, 10-inch wheel; one six-inch vise.

PATTERN AND CARPENTER SHOPS.

One 36-inch band saw, 20-foot saw; one 18-inch rip saw, hand feed; one pony planer, 24x6 inches thick; one jointer, 24-inch head; one hand lathe, 20 inches by 9 feet long; one single head boring machine, one trimmer, one grindstone,



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the

NIAGARA WIRE LINK
OPEN RING TYPE.

Also made in CLOSED RING, THREE CHAIN
and DOMINION (or "Short") TYPES

Oneida Community Cow Ties can be had of all
the leading jobbers. We invite correspondence
where any difficulty is experienced in obtaining
our goods.

ONEIDA COMMUNITY, Limited
NIAGARA FALLS, ONT.

1905

We desire to extend to our many
Friends and Customers our hearty

Greetings FOR...
..THE
New Year

We take this opportunity of thank-
ing you for the business with which
you have favored us in the past, and
earnestly solicit a continuance of
the same for 1905.

Yours truly,

DOMINION WIRE MFG. CO.
LIMITED
MONTREAL and TORONTO.

Last Call for 1904

— USE

FAIRBANKS' VALVES

THE FAIRBANKS COMPANY

MONTREAL

TORONTO

VANCOUVER

WINNIPEG



six benches and vises, one double emery grinder, "Blount;" miscellaneous tools, shafting, hangers, couplings and pulleys; belting and lacing; one 15 horsepower three-phase induction motor.

PASSENGER CAR SHOP.

One $7\frac{1}{2}$ ton electric crane, one Daniels planer, 24 inches wide, 18 feet long; one Whitney scraper, 42 inches wide; one pony planer 36 inches by 6 inches thick; one Berlin invincible sander, 36-inch; one relisher, one jig saw, one sash sticker, one 8-inch sticker, one universal wood worker, with boring and routing table; one trim saw, double; one light sash tenoner, one Boults combination shaper, edge and surface molder, with scroll molding and gear carving attachments; one light hollow chisel mortiser, one light rip saw, one band saw, with resawing attachments; one light single spindle vertical boring machine, one turning lathe, 10 inches by 9 feet, iron bed; one self-feed rip saw, one embossing machine, two veneer presses, ten benches and vises, miscellaneous tools, shafting, hangers, couplings and pulleys; belting and lacing.

POWER PLANT.—BOILER ROOM.

Six 300 horsepower water tube boilers in three batteries, 150 pounds pressure, equipped for hand firing; one breeching, steel plate behind boilers to stack, above ground; two 12x7x10 inch outside packed duplex plunger, boiler feed pumps; two 10x16x12x18 inch duplex packed piston, water supply pumps; two feed water heaters, 1000 horsepower each; one steel stand pipe, 12 feet diameter, 55 feet high; piping from canal to pump, 10-inch cast iron; pump to stand pipe, 8-inch wrought iron.

ENGINE ROOM.

Two 500-k.w. turbines, 1600 revolutions per minute; one surface condenser, one centrifugal pump, with motor; one vertical air pump, with motor; one 25-k.w. turbo-exciter set, one 30-k.w. motor exciter set, one switchboard, one 10-ton hand traveling crane, two air compressors, capacity 1,500 cubic feet each.

Machinery and Electrical Notes.

The Buck Stove Co., of Brantford, purpose enlarging their foundry building early next Spring.

By a note of 422 to 46 the people of Calgary decided in favor of installing a municipal electric lighting plant in that city.

The Toronto Electric Light Co. are installing two new steam turbine engines of a combined capacity of 600 horsepower.

The first wheel of the great Canadian

power development at Niagara Falls was turned on Friday, December 23rd. The first power was generated on Saturday.

The first zinc smelter to be erected in Canada will be built at Frank, Alberta. C. Fernan who is the promoter of the undertaking, states that the work of construction will be begun at once.

Donald Fraser & Sons, Fredericton, N.B., have decided to erect two new shingle mills, one at Cabineau, to have fourteen shingle machines, and the other at Baker Brook, on the St. John River, which is to have ten shingle machines.

Early next year a new mill will be erected at Atwood, Ont., by W. F. Forrest, in which will be installed sufficient power to furnish the town with electric light. The new mill will be thoroughly equipped with all modern machinery.

W. Smith, of Goderich, manufacturer of furniture has placed a boiler and engine in his manufacturing department. He purposes installing a number of wood-working machines for doing fancy scroll sawing, machine carving, burned work, etc.

The Montreal Terminal Railway is seeking power to build an electric railway in the counties of Hochelaga, Maisonneuve, Jacques Cartier, Chambly, Vercheres, Laprairie, St. John's, Iberville, Rouville and St. Hyacinthe.

The first annual general meeting of the Mexican Light and Power Co. was held in Montreal, December 21st. The company have already made a sufficient number of contracts to dispose of all their power. The earnings for last year amounted to \$380,000, an increase over any previous year. The old board of directors were re-elected.

A petition signed by the majority of the ratepayers of St. Albert, Alberta, has been presented to the municipal council asking for the passing of a by-law for raising a sum not exceeding \$30,000, for the purpose of building and operating a grist mill and an electric light plant. Also to take measures of protection from fire by purchasing engines and equipment.

The British Consul at Lyons states that the transmission of electric power over considerable distances is developing, and it is stated that 3,000 horsepower is to be transmitted from the Alps, distant 100 miles from Lyons, for the working of the tramway company. The British Vice-Consul at Grenoble reports that a considerable quantity of electric power is still to be purchased in that district at a cheap rate for the purpose of establishing manufactories of all kinds.

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

SITUATIONS VACANT.

WANTED—Machine hand—young, energetic man preferred, with some knowledge of hardware specialties; must understand the manufacture of dies for stamping steel and other work; if entirely satisfactory, may secure the foremanship of a department; steady employment to competent hand. Apply at once, Box 205, **HARDWARE AND METAL**.

MACHINERY WANTED.

Items under this heading inserted free for readers of **HARDWARE AND METAL**

WANTED—Second-hand lath machine. Geo. A. Watson, Proton Station.

WANTED—Engine for saw mill—portable preferred, if price be right. Address, Postoffice Box 98, Tavistock.

WANTED—Second-hand machinery that is up-to-date and in good order to manufacture heading. Give prices and full information to W. C. Crawford, Tilbury, Ont.

WANTED TO PURCHASE—A good second-hand Weymouth lathe; give full particulars. The Cameron, Dunn Manufacturing Company, Limited, Strathroy, Canada.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

BOILER FOR SALE—60 h.p., second-hand, return tubular boiler, good as new; bargain. Address Box 41, **HARDWARE AND METAL**.

FOR SALE—Boiler, tubular, horizontal, double rivetted, 65 h.p.; also 50 h.p. MacDougall engine. Jas. Lafleur, Rigaud, Que.

FOR SALE—Eclipse improved gasoline engines, stationary, marine and automobile; all sizes; the best engine made; manufactured by D. McKenzie & Co., London, Ont.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, **HARDWARE AND METAL**, Montreal.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

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PRICES
RIGHT

GALVANIZING
ONT.
WIND
ENGINE & PUMP CO.
TORONTO, ONT. LIMITED.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—
CHARLES D. PHILLIPS,
Cables— Emlyn Engineering Works
"Machinery," Newport. NEWPORT, MON., ENGLAND



"The Tool Holder People"
Armstrong Bros.
Tool Company

Manufacturers of Armstrong Patent Lathe and Planer Tools and other machine shop specialties.
617-621 Austin Ave., CHICAGO, ILL.

STREET PAVING and SIDEWALKS a SPECIALTY
SILICA BARYTIC STONE CO.
OF ONTARIO Limited
Head Office:
Ingersoll, Ontario.
Walter Mills, General Manager
Ask for quotations for Septic Tanks.

"MAPLE LEAF"
Stitched Cotton Duck Belting

MADE IN CANADA



MADE IN CANADA

"Maple Leaf" is made of the best cotton duck, woven to our special formula.
"Maple Leaf" is the truest running belt on the market.
"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.
"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying
Main Drive Belts a specialty.
Ask for "Maple Leaf" and take no other.
Beware of Imitations
MANUFACTURED ONLY BY THE
DOMINION BELTING COMPANY
HAMILTON, ONTARIO. Limited
Use our "MAPLE LEAF" Belt Dressing.

HARDWARE AND METAL

THE ACME LATHE & PRODUCTS CO., LTD.
TRAFFORD PARK, MANCHESTER.

We have arranged to carry a large stock of Square and Hex Cap Screws, Square Set Screws, Bright Bolts, Washers, etc., in Canada, and can deliver from Canadian stock after February 1st., 1905. It will pay you, if you are a buyer of these goods, to get in touch with us.

Temporary Offices
25 Queen City Chambers, Church St., TORONTO.

Clauss Brand
Double Swedged Blade
Pocket Scissors.
FULLY WARRANTED



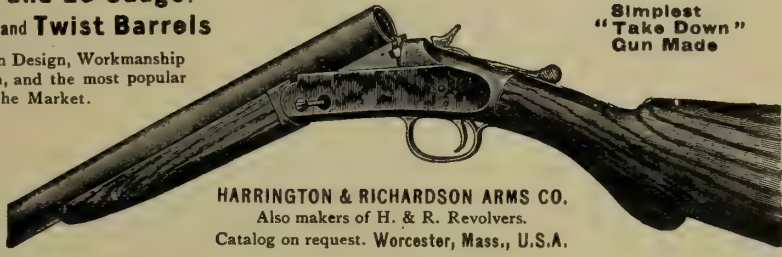
Hand forged from finest steel. Welded on our Composition Metal. Hardened in water. Tempered by Natural Gas. Full Crocus Finish and Finely Nickel Plated.

I. A. TOBIAS, Canadian Agent. **THE CLAUSS SHEAR CO.,** 169 Spadina Ave., TORONTO

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels

Superior in Design, Workmanship and Finish, and the most popular Gun on the Market.



Simplest
"Take Down"
Gun Made

HARRINGTON & RICHARDSON ARMS CO.
Also makers of H. & R. Revolvers.
Catalog on request. Worcester, Mass., U.S.A.

BABBIT
THE
QUALITY & PRICE TO SUIT
ALL GRADES OF WORK.

**NO. 1
STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL**

CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.

Cap Screws. Set Screws,
Machine Screws,
Cold Pressed Nuts,
Studs, Coupling Bolts,
SPECIAL MILLED WORK, Etc.



CANADA FOUNDRY CO., Limited
Head Office and Works; TORONTO, ONT.
DISTRICT OFFICES,
MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
CALGARY, VANCOUVER, ROSSLAND,

RETURNED

JUL 24 1905

To Montreal
cut Book 38
Page 28



A Happy and Prosperous New Year

is the sincere expression of our heartfelt wish to you, and everyone who may have bought, or sold, or used our "C" brand Horse Nails.

As this is the last day of the year 1904, and a fitting time for making good resolutions; may we suggest one? It is that you shall by your influence and orders, favor the purchase and use of our "C" brand Horse Nails in 1905.

The recollection of the quality will remain long after the price has been forgotten.

Canada Nail Co.
Horse
MONTREAL.

Silverware That Sells

WE WISH ALL OUR FRIENDS A VERY BRIGHT NEW YEAR.

How are you prepared for January?

January, February and March are all of them good silverware months, because they are good wedding months.

It is not wise to allow your stock of such a saleable line run low.

Send us your order at once in

Standard Silverware

you get everything that is good—designs, finish, workmanship, plating and base metal. You get a grade of Silverware that you can guarantee to your customer because we guarantee it to you.

This mark



is known to buyers of Silverware in every part of Canada, through advertising in the weekly and daily papers. Quickly recognized and implicitly trusted. It pays to sell advertised goods.

Send for our Catalogue if you have not a copy.

STANDARD SILVER CO., LIMITED
Hayter St., TORONTO.

RETURNED

JUL 24 1905

THE CANADIAN IRON AND STEEL INDUSTRY.

A DESCRIPTION of every blast furnace, rolling mill and steel works in Canada is given in a recent bulletin of the American Iron and Steel Association, together with the character of the product made and the annual capacity of the plant. The information thus presented shows that the Province of Nova Scotia has eight blast furnaces and three rolling mills of which two have steel plants. New Brunswick has one rolling mill. Quebec has three blast furnaces and five rolling mills, of which one has a steel plant. Ontario has five blast furnaces and nine rolling mills, of which three have steel plants. A rolling mill is under construction in Nova Scotia, another is in process of building in Ontario and still another is being constructed in Manitoba. The total number of blast furnaces in Canada is sixteen, of which eleven use coke and five use charcoal for fuel. The completed rolling mills aggregate eighteen, of which one has a Bessemer steel plant, one a Tropenas steel plant and five have open hearth steel plants. The annual capacity of the blast furnaces is placed at 830,000 gross tons of pig iron; of

the Bessemer and Tropenas steel plants, 200,800 tons; of the open hearth steel plants, 451,000 tons, while the total capacity in finished, rolled and forged products is placed at 839,600 tons.

Commenting on the report the Iron Age says: "The showing thus made for our northern neighbor is quite satisfactory, considering the population of the country and its distribution over such a wide area. Canada is a sparsely settled country, and it is necessary that very long distances be traversed to reach native markets for the home iron and steel industry. The capacity of the works may seem insignificant when compared with our own huge iron and steel industry. Nevertheless, but half a century back this country could show an industry not much greater than that now possessed by Canada. The development, it must also be borne in mind, is a matter of quite recent years. Until ten years since the iron and steel industry of Canada was hardly worthy of the name. Since then aggressive efforts have been made to develop the mineral resources of the Dominion, and the result is shown in the above figures. It may be claimed that this development is artificial, as it has been forced by a system of bounties,

but, no matter by what method the industry has been built, the potent fact must be admitted that the works have been established and are in shape to turn out product. The time may come when through the withdrawal of bounties some of the Canadian plants may have a severe struggle to maintain themselves. But even in that case, if the properties pass from the hands of the original owners, we can gather from the experience of this country that they may not be wiped out of existence. A bankrupt iron works when taken over by new parties may become a greater market factor than before. American iron and steel manufacturers appear to be destined to find their Canadian trade steadily diminishing."

IRON PRODUCTION.

The total production of pig iron in the world last year is figured by the best authorities at 46,733,000 metric tons, a gain of 55 per cent. over the previous year. The output of United States was stationary; Canada and Russia showed decreases. However, the large increase of 20 per cent. by the German blast furnaces materially assisted in bringing the total output of this year above that of last year.

The Oxford Chancellor Range

FOR 1905

EVERY range sample room in Canada should start the New Year with an Oxford Chancellor in a prominent position on the floor. It is a range that will give prestige to your establishment and give the best satisfaction to your customers.

We would advise your ordering early, as the demand on our stock at this time is very large.

We wish our Customers and Friends a Prosperous 1905

The Gurney Foundry Co., Limited

Toronto

Winnipeg

Vancouver

CORRESPONDENTS: The Gurney-Massey Co., Limited, Montreal, Que.; The Gurney Standard Metal Co., Limited, Calgary, Alta.

TO MANUFACTURERS' AGENTS:

HARDWARE AND METAL has enquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of enquirers in our various offices throughout Canada and in Great Britain without charge.

Address **Business Manager**

HARDWARE AND METAL
Montreal and Toronto.



A Bright
New Year

TO YOU ALL.

YORK METAL POLISH
(Liquid or Paste)

MAKES FOR BRIGHTNESS.
ORDER FROM YOUR JOBBER.

ANGLO-CANADIAN SUPPLY CO
29 Church-St., TORONTO.

OAKEY'S The original and only Genuine Preparation for Cleaning Cutlery. 6d. and 1s. Cansisters
'WELLINGTON'
KNIFE POLISH

JOHN OAKEY & SONS, LIMITED
MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

JOHN FORMAN, 644 Craig Street MONTREAL.

No one else
will do it.

WE CUT

BRASS and COPPER

—SHEETS
—RODS
—TUBING

to your order—any size. Quick Shipments.

The Booth Copper Co.,
LIMITED,

119-123 Queen St. East,
TORONTO.

STOVES AND TINWARE.

Stove Repair Orders.

By Upstate Stovemaster.

WHY are orders for repairs not filled with greater promptness? There is no one thing that will make a dealer so faithful to the house of whom he buys his stoves as the quickness of the house in filling his orders for repairs, and yet there are many stove manufacturers who fail to appreciate this fact. While there has been great improvement in the promptness of filling repair orders within the last ten years, still many manufacturers are slow in filling such orders, especially during the busy season of the stove trade.

The manufacturer who conducts his repair department in such a manner as to be able to fill his repair orders not later than 24 hours after they are received not only holds his customer, but gains new ones from the reputation he makes by filling orders promptly. He also sells more repairs than he otherwise would, as the dealer is not likely to send his orders to the "pirate" when he knows that his stove manufacturer will fill his order promptly.

Ninety per cent. of the people who want stoves repaired wait until it is absolutely necessary before they give the retailer the order. Then they want them at once. The dealer says: "All right, I will order them to-day." Sometimes the repairs come along quickly, but more often they do not. The man whose stove is broken down calls at his dealer's store every day, but no repairs are in sight. This goes along sometimes for a couple of weeks or more. In the meantime the man gets out of patience, and the life of the dealer is made miserable. The man swears that he will never buy another stove of "that make." Besides this, the dealer is liable to lose the man's trade.

After the dealer has had a dozen or more experiences of the same kind, he concludes that he will put in another line of stoves, and begins to look about for the stovemaster who fills repair orders without delay. The stove manufacturer who undertakes to fill his repair orders from the same racks and bins in which he keeps the castings for mounting stoves will generally, especially during the busy season, be short of castings either for his stoves or for his repair orders. Then, of course, the stoves cannot be finished. It is not human nature to lose the sale of a stove; consequently the castings go into stoves and the repair order is delayed.

The stove manufacturer who has his repair department and the castings for the department entirely separated from the stove mounting department has the problem solved. He not only fills his repair orders promptly, but does away with a lot of extra work. He keeps his customers good natured, and he finds that his repair business increases each year and his stove business also. He should have floor space large enough so that sufficient racks and bins may be erected to hold a good assortment of all his different repairs. This keeps the repairs entirely separate from the castings used for mounting stoves. The man who has charge of the repair department can easily see that he has an ample supply of castings, and the mounting department will be able to get out more stoves.—Metal Worker.

Drawback Payments on Tin Plates.

THE forthcoming annual report of the United States Department of Commerce and Labor upon the practical operations of the drawback law in the fiscal year 1904, which embraces detailed statistics for that year as compared with 1903, will show that, while exports of manufactured articles increased \$45,000,000 during the past year the total drawbacks paid declined \$250,000—namely, from \$5,058,862 to \$4,809,808, says the Metal Worker. The total for 1904 was considerably less than that of any year since 1899, and was \$620,000 less than in 1900, when the payment of drawbacks reached high water mark, the total being \$5,430,397.

More than one-third of the total drawbacks paid in the past fiscal year has been rebated upon tin plates used in the manufacture of tin cans. In 1904 these drawbacks amounted to \$1,646,263, but this was less by \$200,000 than the average amount paid during the preceding four years. At first glance it might be assumed that these figures indicated a falling off in the exports of petroleum, for which these cans are largely used, but this is not the case. Although the increased use of tank steamers has limited the employment of tin cans to some extent, nevertheless the shipments of "case oil," as it is called, have steadily increased. The controlling factor has been the use of considerable quantities of domestic tin plates, which the United States Steel Corporation has sold to the oil exporters, with benefit of an unofficial rebate which is slightly less than the drawback allowed by the Government on imported plates.



Solarine Bar Polish

Best and cheapest preparation for polishing:— Brass, Copper, Steel, Tin, Zinc, Bar Fixtures, Kitchen Utensils.
A rapid cleaner expressly designed for all kitchens.

For Ontario, Address
H. F. FALKNER,
60 George St., TORONTO



Don't book your order for lanterns until you see our improved **COLD BLAST LANTERN** and get our prices for 1905. We lead, others follow.
E. T. WRIGHT & CO.,
HAMILTON, ONT.

A PERMANENT and Handsome Roof.



Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. G. JENKING, Sole Agent,
Room 215 Coristine Building, - **MONTREAL.**
Sole agents being appointed in each district. Write to-day.

Genuine Pratts Astral Lamp Oil

Sold in all countries and recognized as the highest grade oil manufactured.

WHOLESALE ONLY

THE QUEEN CITY OIL COMPANY, Limited, - TORONTO, ONT.

SNOW SHOVELS, FURNACE SCOOPS

Both Long and D Handles



Write for our Catalogue.

F. E. KOHLER & CO., CANTON, O., U.S.A.

New Year Greetings

IN entering on our forty-fifth business year, we desire to extend to our many customers and friends our hearty appreciation for the favors of the past, and hope for a continuance of the same in the future.

Our best wishes to all for A Happy and Prosperous New Year.

The Thos. Davidson Mfg. Co., Limited
Montreal, Q.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Canadian Corundum Wheel Co., of Hamilton, is enlarging its premises with the intention of starting a new industry. This new industry is the vitrifying of emery wheels. Goods of this sort to the value of \$25,000 were imported last year. This is the first manufacturing plant of its kind in Canada.

The directors of the Dominion Coal Co. met in Montreal on December 21st, and after declaring the usual half-yearly dividend of four per cent. on the preferred stock, decided not to pay a dividend on the common stock on account of the large floating debt of the company.

The Nova Scotia Steel and Coal Co. at Bell Island will have put out 100,000 tons of ore for North Sydney alone this season, besides the quantity they have sent to Rotterdam and other points. Up to date they have landed at Cape Breton 80,000, and three steamers with a carrying capacity of 5,000 tons will take the balance.

In 1899 the total trade of Canada with the Yukon was 24,856 tons, 15,012 tons foreign and 9,844 domestic. For 1904 the total importations amounted to 35,468 tons, of which the foreign trade was only 12,602 tons. For the past three fiscal years there has been a large and increasing balance of trade in Canada's favor. This in the case of goods entering northern British Columbia and Yukon via the White Pass and Yukon route, amounted in 1901-2 to \$1,916,850; in 1902-3, \$1,994,539, and in 1903-4, \$2,645,622.

A month ago the announcement was published that Wm. Mackenzie, president of the Canadian Northern Railway, had sold \$5,000,000 of the company's bonds in New York. The name of the purchaser was not then disclosed. However it has been officially announced that J. P. Morgan & Co. were the purchasers. The bonds are on the company's lines within the Province of Manitoba. They are at the rate of \$10,000 a mile, bear 4 per cent., and are guaranteed by the

Manitoba Government under their agreement passed in the session of 1901.

The Ottawa and New York Railway was sold on December 22nd at St. Regis Falls. It was bought in by a committee acting for the bondholders for the sum of \$1,000,000. It is believed in Ottawa, however, that the line has passed into the control of the New York Central. That impression is strengthened by the fact that Mr. Smith, General Manager, and Mr. R. Burnham Moffett, attorney for the New York Central, were present at the sale and afterwards went to Ottawa. The Ottawa and New York railway runs from Ottawa to Tupper Lake Bay.

NOTES.

The Alberta Railway and Irrigation Co. is seeking power to acquire the Western Alberta Railway.

The McAdamite Metal Co., of Staten Island, New York, intend opening a branch in St. John, New Brunswick.

The Toronto, Hamilton and Buffalo Railway is asking for legislation to empower it to issue part of its capital stock as preference stock.

Placer gold which was discovered quite recently in New Ontario is turning out to be very valuable. Three carloads which were sent to New York the other day brought \$112,500.

The statement of the shipments of spruce, pine and birch deals, etc., from the Province of New Brunswick for the season of 1904 shows an amount of 93,000,000 feet. This is a smaller amount than any previous season since 1895.

A despatch from Sydney says the blast furnace of the Nova Scotia Coal and Steel Co., at Sydney Mines, N.S., is chilled, and as a result the production of pig iron is stopped. It will cause considerable loss to the company.

COMPANIES INCORPORATED.

Dorion Lead and Zinc Co., Port Arthur, share capital, \$50,000; purpose to carry on in all its branches the business of a mining, milling, reduction, and development company. The directors are: M. Jacoby, H. J. Achenbach, and W. H. Salter, all of Duluth.

Condensed Peat Fuel Co., Peterboro,

share capital, \$40,000; purpose to carry on the business of a mining, milling, reduction and development company, also to purchase, sell and deal in peat and peat producing lands. The directors are: E. V. Moore, A. L. Davis, D. H. Moore and G. M. Roger, all of Peterboro, and W. A. Salter, of Toronto.

The Alza Co., Montreal, capital \$100,000; purpose to manufacture window screens, window sashes and doors with or without their invention also to do a general business as wood and metal workers. The directors are: J. S. Teasdale, H. L. O'Donoghue, and J. C. Moore, all of Montreal.

Adams Bros., Harness Mfg. Co., Toronto, capital \$375,000; purpose to take over the business now known as the Adam Bros. and carry on each branch of the business on a much larger scale. The directors are: J. H. Adams, C. Adams, W. H. Adams, and Wm. Stewart, all of Toronto, and F. W. Adams, of Winnipeg.

Railway Specialty Co., of Canada, Montreal, capital \$20,000; purpose to manufacture and deal in all appliances, articles and commodities used in connection with the operation of railways, tramways, etc. The directors are: J. N. Rattey and Mary I. Hickson, both of Ottawa, E. M. Smith, New York, N. J. Holden, Montreal, and C. F. Quincey, Oconomowoc, Wisconsin.

The Automatic Railway Signal Co., Montreal, capital \$500,000; purpose to manufacture and sell and generally deal in a certain "Railway Signalling System" invented by Jos. Lemire, Drummondville, Quebec; the directors are J. Lemire and Rev. F. Tetreau, both of Drummondville, and M. Langlois, O. Herbert and H. Sawriel, all of Montreal.

The National Construction Co., Montreal, capital \$250,000; purpose to take and sublet contracts, also to supply material for the building and operation of railways, telegraph and telephone poles and lines, canals, bridges, elevators, piers, and buildings connected with public works, etc. The directors are: J. Hobson, R. S. Logan, H. W. Walker, F. Scott, and H. Philips, all of Montreal.

The Canada Saw Co., Ottawa, capital \$125,000; purpose to manufacture and deal in saws, tools, and sawmill machinery of all descriptions, also to purchase the plants, books debts, stock-in-trade and good will of the Ottawa Saw Company. The directors are: J. M. H. Robertson and F. Bacon, both of Montreal, and G. H. Bindon, P. M. Feeny, J. I. McCracken, C. McGee and W. S. O'Dell, all of Ottawa.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

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Counsellor at Law U.S. Supreme Court.
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Box 264, Station G, Washington, D.C.

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Warren White Sulphur Springs,
Totten P.O., Virginia.

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Sample for 10 cents.

SCOTT, GREENWOOD & CO.

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Order a stock of

**"Windmill Best"
Galvanized Sheets**

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

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By Buying Imitation FIRE, Water, Dust and
Air-Proof SKYLIGHTS. **BUY THE
GENUINE.** Our pamphlet will tell you
about "OUR IMPROVED."

Manufacturers and Contractors
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CORRUGATED IRON**

Cornices, Metal Ceilings, Sidings and all
other Metal building goods.

A. B. ORMSBY LIMITED,

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TORONTO, ONT.



This design a guar-
antee of quality

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IF YOU DO YOU SHOULD USE "CANADIAN-MADE" PAPER
All grades, from the highest "Glossy Finish" to the
rough "Antique" and bulky "Featherweight."

YOUR PRINTER

CAN SUPPLY IT.

CANADA PAPER CO.

TORONTO LIMITED MONTREAL

63

Looks like cold weather.

January is hard on the coal bin.

Plenty good cinders and unburned
coal in the ash pan.

1, 2, 3, 6, 12 Dozen—more if desired,
Tell us when to ship.

C. M. CUTTS & CO., SOLE MAKERS Toronto Junction, Ont.

64

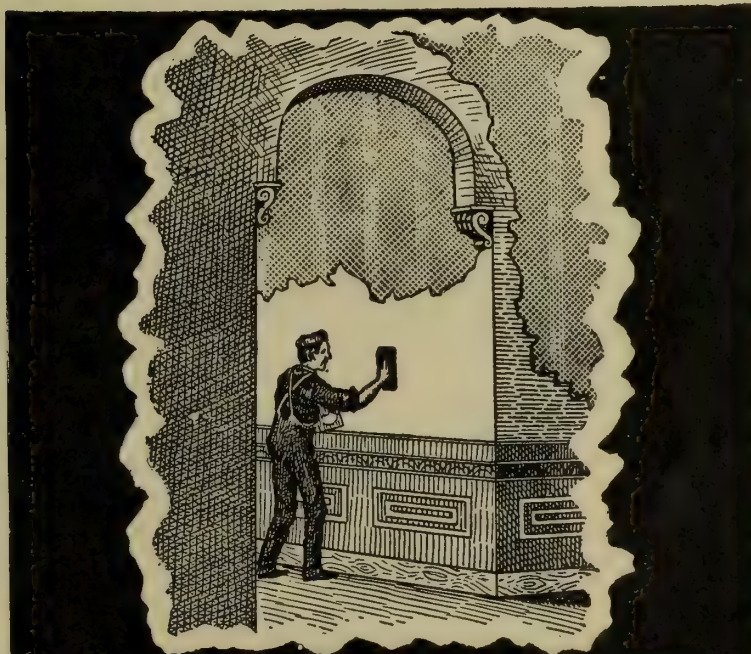
—Ash Sifters will be in demand.

—Cutts' ALL-METAL Sifter is best.

Sells at 25c. retail.

Sells at sight.

Get a stock.

**Pedlar's "Perfect" Metal Lath**

On and after September 1st, 1904, the
prices on "Perfect" Metal Lath will be as
follows:

26 gauge 10c. per square yard.

24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation
and as we have a capacity of ten tons or
12,000 yards per 10 hours, all orders can
be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.**

RETURNE

NOV 22 1904

36 Dimes

Cut Book 4

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R.A.W.

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE CALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

SOIL PIPE AND FITTINGS.
Med. and Extra heavy pipe and fittings, dis. 60 per cent.
7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER. Per lb.
Bar, half-and-half, guaranteed 0 17½
Wiping 0 15½
Refined 0 16½

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb. 0 08
Chrome yellow 0 15
Golden ochre 0 08
French 0 05
Marine black 0 04
Chrome green 0 10
French permanent green 0 13
Signwriters' black 0 15

WHITE LEAD.

Per 100 lb.

Pure 4 75
No. 1 4 50
No. 2 4 25
No. 3 3 87½
No. 4 3 50
Munro's Select Flake White 4 75
Elephant and Decorators' Pure 4 75
Monarch 5 00
Decorator's Pure 4 75
Essex Genuine 4 25
Sterling Pure 5 00
Island City Pure 5 00
Ramsay's Pure Lead 5 00
Ramsay's Exterior 4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt \$4 25 \$4 50
Genuine, 100 lb. kegs, 4 75
No. 1, 560 lb. casks, per cwt 4 00
No. 1, 100 lb. kegs, per cwt 4 25

WHITE ZINC.

Extra Red Seal 0 06 0 08
French V. M. 0 06 0 06½
Lehigh 0 06 0 06½

DRY WHITE LEAD.

Pure, casks 4 25
Pure, kegs 4 50
No. 1, casks 4 00
No. 1, kegs 4 25

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon 1 20
Second qualities, per gallon 1 00
Barn (in bbls.) 0 60 0 90
The Sherwin-Williams paints 1 35
Canada Paint Co.'s pure 1 25
Toronto Lead & Color Co.'s pure 1 25
Sanderson Peary's pure 1 20
Standard Co.'s "New Era" 1 30
"Globe" barn 60 70
Francis-Frost Co.'s "Ark" B'd 1 25
"British Navy deck 1 50
Henderson & Potts's "Anchor" 1 35
Ramsay's paints, Pure, per gal. 1 20
"Thistle, 1 00
"Outside, bbls 0 55 0 65
Island City House Paint 1 25
"Floor 1 25
Sterling House Paint 1 20
"Floor 1 10
National 1 05

PARIS GREEN.

BERGERS' ENGLISH.

Petroleum, barrels, per lb. 0 15½
Arsenic, kegs 0 15½
50 and 100 lb. drums 0 16
25-lb. drums 0 16½
1-lb. paper boxes 0 17
1-lb. tins 0 18
1-lb. paper boxes 0 19
1-lb. tins 0 20
Terms—2 per cent. off 30 days, or 90 days net.

PUTTY.

Bulk in bbls 1 45
Bulk in less quantity 1 70
Bladders in kegs, boxes or loose 1 85
25-lb. tins 1 80
12½ lb. tins 2 05
Bladders in bulk or tins less than 100 lb. 1 85

VARNISHES.

In 5-gal. lots. Per gal. Net.

Carriage, No. 1 1 50 1 60
Pale durable body 4 10 4 25
"rubbing 2 85 3 20
Gold size, Japan 1 50 1 60
No. 1 brown Japan 0 85 0 90
Elastic oak 1 50 1 60
Furniture, extra 1 10 1 25
"No. 1 0 90 1 00
Hard oil finish 1 35 1 50
Light oil finish 1 60 1 70
Damar, white 1 75 2 00
Shellac, white 2 40 2 50
"orange 2 30 2 40
Turpentine, brown Japan 1 10 1 20
"black Japan 1 10 1 20
"No. 1 0 85 0 90
Elastilite varnish, 1 gal. can, each 2 00
Granitine floor finish, per gal 2 75
Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each.
Sherwin-Williams' kopal varnish, assorted case, from to 1 gal., \$2.50.

GLUE.

Common 0 08 0 08½
French medal 0 10 0 14
White, extra 0 18 0 22
Gelatine 0 18 0 20
Strip 0 19 0 20
Coopers 0 12 0 16
Eutiner 0 12 0 16
Ground 0 12 0 16
Cologne, genuine 0 12 0 16

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent. American \$2.00 per 1000.
C. B. Caps American, \$2.60 per 1000.
Rim Fire Pistol, discount 30 p.c., American.
Rim Fire Cartridges, Dominion, 50 and 5 p.c. Central Fire, Military and Sporting, American, vdd 20 per cent. to list. B. B. Caps, discount 40 per cent., American.
Central Fire Pistol and Rifle, list net Amer.
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American 10 per cent. advance on list.
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount. American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.
Brass Shot Shells, 55 per cent.
Primers, Dom., 30 per cent.; American, \$1.75 per lb.

Wads.

Best thick brown or grey felt wads, in ½-lb. bags \$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges 0 99
Best thick white card wads, in boxes of 500 each, 10 gauge 0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges 0 20
Thin card wads, in boxes of 1,000 each, 10 gauge 0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—Per M.
11 and smaller gauge 0 60
9 and 10 gauges 0 70
7 and 8 " 0 90
5 and 6 " 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge 1 15
9 and 10 gauges 1 40
7 and 8 " 1 65
5 and 6 " 1 90

ADZES.

Discount 20 per cent.

ANVILS.

Wright's, 80-lb. and over 0 10½
Hay Budden, 80-lb. and over 0 09½
Brook's, 80-lb. and over 0 11½

APPLE PARERS.

Woodyatt Hudson, per doz., net 4 50

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.

Chopping Axes
Single bit, per doz. 7 00 10 00
Double bit, 10 00 18 00
Bench Axes, 40 per cent.
Broad Axes, 25 per cent.
Hunters' Axes 5 50 6 00
Boys' Axes 6 25 7 00
Splitting Axes 7 00 12 00
Handled Axes 10 00
AMERICAN AXE AND TOOL CO.
Red Ridge, boys', handled, 5 75
"hunters' 5 25
Underhill American Bench Axes, 40 p.c.

AXLE GREASE.

Ordinary, per gross 6 00 7 00
Best quality 10 00 12 00

BELLS.

Hand.

Brass, 60 per cent.

Nickel, 55 per cent.

American make, discount 63½ per cent.

Canadian, discount 45 and 50 per cent.

Gongs, Sargent's, 5 50 8 00

"Peterboro", discount 50 and 10 per cent. off new list.

American, each 1 15 3 00

American, per lb. 0 35 0 40

Extra, 60 per cent.

Standard, 60 and 10 per cent.

No. 1, not wider than 6 in., 60, 10 and 10 per cent.

Agricultural, not wider than 4 in., 75 per cent.

Bits.

Gilmour's, discount 60 per cent.

Rockford, discount 50 and 10 per cent.

Jennings Gen., net list.

Gilmour's, 47½ per cent.

Clark's, 40 per cent.

Clark's, per doz 0 65 0 90

Diamond, Shell, per doz 1 00 1 50

Nail and Spike, per gross 2 25 5 20

BLIND AND RED STAPLES.

All sizes, per lb. 0 07½ 0 12

Carriage Bolts, common (\$1 list) Per cent.

" " 3-16 and ½ 60 and 10

" " 5-16 and ¾ 55 and 5

" " 7-16 and up 55 and 5

" " full sq. (\$2.40 list) 60

" " Norway Iron (\$3 list) 60

Machine Bolts, all sizes, ½ and less 60

Machine Bolt, 7-16 and up 60

Plough Bolts 55 and 5

Blank Bolts 55 and 5

Bolt Ends 55 and 5

Sleigh Shoe Bolts 70

Coach Screws, cone point 70

Nuts, square, all sizes, 4c. per lb. off.

Nuts, hexagon, all sizes, 4c. per lb. off.

Stove Rods per lb., 5½ to 6c.

Small and medium, ball per M. 4 25

Small heel 4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.

BUTCHERS' CLEAVERS.

German per doz. 6 00 9 00

American 12 00 18 00

BUTCHER KNIVES.

Bailey's per doz. 0 60 8 30

BUILDING PAPER, ETC.

Tarred Felt, per 100 lb. 1 85
Ready roofing, 2-ply, not under 45 lb. per roll 0 90
Ready roofing, 3-ply, not under 65 lb. per roll 1 15
Carpet Felt per ton 45 00
Heavy Straw Sheathing per ton 35 00
Dry Sheathing per roll, 400 sq. ft. 0 40
Tar 400 " 0 50
Carpet Felt 400 " 0 55
Tanned Fibre 400 " 0 65
O. K. & I. X. L. 400 " 0 70
Resin-sized 400 " 0 45
Oiled Sheathing 400 " 1 00
Oiled 400 " 0 70
Root Coating, in barrels per gal. 0 17
"small packages 0 25
Refined Tar per barrel 5 00
Coal Tar 4 00
Coal Tar less than barrels per gal. 0 15
Roofing Fitch per 100 lb. 1 00
Slater's felt per roll 0 60

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90 or 2-inch.

BUTTS.

Wrought Brass, net revised list.

Cast Iron.

Loose Pin, discount 50 per cent.

Wrought Steel.

Fast Joint, discount 70 to 70 and 5 per cent.

Loose Pin, discount 70 to 70 and 5 per cent.

CARPET STRETCHERS.

American per doz. 1 00 1 50

Bullard's 6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.

Plate, discount 52½ to 57½ per cent.

CATTLE LEADERS.

No. 32 and 33 per gross 7 50 8 50

CHALK.

Carpenters' Colored, per gross 4 45 0 75

White lump per cwt. 0 60 0 65

Red 0 05 0 06

Crayon per gross 0 14 0 18

CHISELS.

Socket, Framing and Firmer.

Broad's, discount 60 and 10 per cent.

Warnock's, discount 50 and 10 per cent.

P. S. & W. Extra, discount 60 and 10 per cent.

FOODS—STOCK.

Colonial Stock Foods, 50c. packages, per doz \$4 00

" " 25c. pkgs., " 2 00

" " 10c. " 75

" " 25-lb. pall, each 1 80

Poultry Foods, 25c. packages 1 25

Cough Powders, per doz 1 25

Worm 1 25

International Stock Foods, \$1 packages, per doz. 8 00

International Stock Foods, per pall 2 75

" " per bbl. 10 50

" Poultry \$1 pkgs. per doz. 8 00

" Worm Powders, 50c. pkgs. 4 00

" Pine Healing Oil, per doz 3 00

" Pheno-Chloro, \$1 pkgs. per doz 8 00

" Hoof Ointment 8 00

" Compound Absorbent 16 00

Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.

CLOTHES REELS.

Davis Clothes Reels, dis. 40 per cent.

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.				GAUGES.				Clothes line, No. 61..				Cabinet.			
Plain or Corrugated.				Marking, Mortise, Etc.				Harnes.....				Eagle, discount 30 per cent.			
3-inch.....	per 100 feet	3 00		Stanley's, discount 50 to 55 per cent.				Hat and coat..... per gro.				Padlocks.			
4 ".....	"	4 00		Wire Gauges.				Chandelier..... per doz.				English and Am. per doz.			
5 ".....	"	5 25		Winn's, Nos. 26 to 33.....each	1 65	2 40		Wrought Iron.				Eagle, discount 20 to 25 per cent.			
6 ".....	"	6 75		GILLET'S POWDERED LYE.				Wrought hooks and staples				MACHINE SCREWS.			
		9 00		1-case, \$3.70; 3-case, \$3.60; 5-case and over,	\$3.50.			Wire.				Iron and Brass.			
CRADLES, GRAIN.				HALTERS.				Hat and coat, discount 60 per cent.				Flat head, discount 25 per cent.			
Canadian, discount 20 to 25 per cent.				Rope, 1/2-inch.....per gross	4 00			Belt.....per 1,000				Round head, discount 20 per cent.			
CROSSCUT SAW HANDLES.				Rope, 3/4-inch.....	12 00			Screw, bright, discount 60 per cent.				MALLET.			
S. & D., No. 3.....	per pair	0 17 1/2		Rope, 1 to 1 1/2-inch.....	14 00			HORSE NAILS.				Tinmiths'.....per doz.			
S. & D., " 5.....	"	0 22 1/2		Leather, 1-inch.....per doz.	4 00			"P.B." Brand, 55 to 60 per cent.				Carpenters', hickory, ".....			
S. & D., " 6.....	"	0 15		Leather, 1 1/2 ".....	5 20			"C" brand, 40, 10 and 7 1/2 per cent. off list				Lignum Vitae.....			
Boynton pattern.....	"	0 20		Web.....	2 45			"M" brand, 55, per cent.				Caulking, each.....			
DOOR SPRINGS.				HAMMERS.				"Monarch", 50 and 7 1/2 per cent.				MATTOCKS.			
Torrey's Rod.....	per doz.	1 85		Nail.				"Peerless" 50 per cent. dis.				Canadian.....per doz.			
Coll. 9 to 11 in.....	"	0 95	1 65	Maydele's, discount 5 to 10 per cent. Canadian	discount 25 to 27 1/2 per cent.			HORSESHOES.				MEAT CUTTERS.			
English.....	"	2 00	4 00	Tack.				F.O.B. Montreal				American, discount 3 1/2 per cent.			
DRAW KNIVES.				Magnetic.....per doz.	1 10	1 20		"P.B." brand, new pattern, base.....				German, 15 per cent.			
Coach and Wagon, discount 50 per cent.				Sledge.....				"M" brand, base.....				Gem.....each			
Carpenters' discount 60 and 10 per cent.				canadian.....per lb.	0 07 1/2	0 08 1/2		Add 15c. Toronto, Hamilton, Guelph.				MILK CAN TRIMMINGS.			
DRILLS.				Ball Peen.	0 22	0 25		JAPANNED WARE.				Discount 25 per cent.			
Miller's Falls, per doz., net list.				English and Canadian, per lb.	0 22	0 25		50 per cent.				NAILS.			
DRILL BITS.				HANDLES.				PICKS.				Cut.			
Morse, discount 37 1/2 to 40 per cent.				Axe, 2nd growth, per doz. net	3 00	4 00		Star.....per doz.				Wire.			
Standard, discount 50 and 5 to 55 per cent.				Store door.....per doz.	1 00	1 50		KETTLES.				2d.....			
FAUCETS.				Fork.				Brass spun 7 1/2 per cent. discount off new list.				3d.....			
Common, cork-lined, discount 35 per cent.				C. & B., discount 40 per cent., revised list.				Copper.....per lb.				4 and 5d.....			
10-Inch.....per 100 ft.	10 00			Hoe.				American, 60 and 10 to 65 and 5 per cent.				6 and 7d.....			
EAVETROUGH.				C. & B., discount 40 per cent., revised list.				KEYS.				8 and 9d.....			
5 and 6-inch, common.....per doz.	1 20			Saw.				Lock, Canadian dis. 40 to 40 and 10 per cent.				10 and 12d.....			
7-inch.....	1 35			American.....per doz.	1 00	1 25		Cabinet, trunk and padlock.				16 and 20d.....			
Polished, 15c. per dozen extra.				Plane.				American.....per gross				30, 40, 50 and 60d (base).....			
ESCUTCHEONS.				Hammer and Hatchet.				KNOBS.				Cut nails in carlots 5c. less.			
Discount 50 and 10 per cent., new list				Canadian, discount 40 per cent.				Door, japanned and N.F., per				Steel cut nails 10c. extra.			
ESCUTCHEON PINS.				HANGERS.	doz. pairs.			doz.....				Miscellaneous wire nails, discount 75 per cent.			
Iron, discount 40 per cent.				Steel barn door.....	8 00	10 00		Bronze, Berlin.....per doz.				Coopers' nails, discount 30 per cent.			
FACTORY MILK CANS.				Stearns, 4-inch.....	4 50			Shutter, porcelain, F. & L.				NAIL PULLERS.			
Discount off revised list, 40 per cent.				5-inch.....	6 00			screw.....per gross				German and American.....			
FILES AND RASPS.				Zenith.....	9 00			White door knobs.....per doz.				NAIL SETS.			
Great Western.....70 and 10 per cent.				Lane's covered—				Net prices.				Square, round and octagon,			
Arcade.....70 " 10 "				No. 11, 5-foot run.....	8 40			LAMP WICKS.				per gross.....			
Kearney & Foot.....70 " 10 "				No. 11 1/2, 10-foot run.....	10 80			Discount, 60 per cent.				Diamond.....			
Disston's.....70 " 10 "				No. 12, 10-foot run.....	12 60			LADDERS, EXTENSION.				POULTRY NETTING.			
American.....70 " 10 "				No. 14, 15-foot run.....	21 00			Waggoner Extension Ladders, dis. 40 per cent.				2-in. Mesh, 19 w.g., dis. 60 per cent.			
J. Barton Smith.....70 " 10 "				Steel, covered.....	4 00	11 00		LANTERNS.				2-in. Mesh, 16 w.g. and heavier, 50 p.c.			
McClellan.....70 " 10 "				" track, 1 x 3-16 in (100 ft).....	3 75			Cold Blast.....per doz.				OAKUM.			
Eagle.....70 " 10 "				" 1 1/2 x 3-16 in (100 ft).....	4 75			No. 3, "Wrights".....				U. S. Navy.....per 100 lb.			
Nicholson, 60 and 10 to 60, 10 and 5				HARVEST TOOLS.				Ordinary, with O burner.....				Plumbers.....			
Royal.....80				Discount 60 per cent.				Dashboard, cold blast.....				McClary's Model galvanized			
Globe.....70 to 75				HATCHETS.				No. 0.....				oil can, with pump, 5 gallon,			
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.				Shingle, Red Ridge 1, per doz.....	4 40			Japanning, 50c. per doz. extra.				per dozen.....			
Jowitt's, English list, 25 to 27 1/2 per cent.				2, ".....	4 85			LEMON SQUEEZERS.				Davidson oilers, discount 40 per cent.			
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50				Barrel, Underhill.....	5 00			Porcelain lined.....per doz.				Zinc and tin, discount 50, 50 and 10 per cent.			
GLASS.				HAT ENAMEL.				Galvanized.....				Copper.....per doz.			
Window. Box Price.				Henderson & Potts' "Anchor Brand"				King, wood.....				Brass.....			
Size United	Per	Star	D. Diamond	Blind, Parker's, discount 60 per cent.	0 06 1/2			King, glass.....				Malleable, discount 25 per cent			
Inches.	50 ft.	100 ft.	50 ft.	Heavy T and strap, 4-in., per lb.....	0 08 1/2			All glass.....				GALVANIZED PAIS.			
Under 26.....	3 80		5 06	" " 6-in., ".....	0 08			LAWN MOWERS FOR 1905.				Dufferin pattern pails, discount 47 1/2 per cent			
26 to 40.....	4 00		5 44	" " 8-in., ".....	0 06			Woodyatt, 10 1/2-in., 14-in. cut \$ 8 50 to \$11 00				Flaring pattern pails, discount 47 1/2 per cent.			
41 to 50.....	4 50		6 56	" " 10-in., ".....	0 05 1/2			Star, 9-in. ".....				Galvanized washtubs, discount 47 1/2 per cent.			
51 to 60.....	4 75		7 50	Light T and strap, discount 65 and 5 per cent.				Daisy, 8-in. ".....				PIECED WARE.			
61 to 70.....	5 00		8 32	Screw hook and hinge—				Philadelphia, 7 1/2-in. ".....				Discount 40 per cent off list, June, 1899.			
71 to 80.....	5 30		9 38	6 to 10 in.....per 100 lb.	4 50			Grass Boxes.....				10-qt. flaring sap buckets, discount 40 per cent			
81 to 85.....			10 75	12 in. up.....	3 25			King Edw'd, 12-in., 14-in. cut 9 00 to 10 00				6, 10 and 14-qt. flaring pails dis. 40 per cent.			
86 to 90.....			12 30	Spring, No. 20, per gro. pairs.....	10 50			Horse Lawn Mowers, "Special."				Creamer cans, discount 40 per cent.			
91 to 95.....			15 00	Spring, Woodyatt pattern, per gro. No. 5,	\$17 50; No. 10, \$18; No. 20, \$10 80; No.			Discount, 50 per cent. with freight concessions in quantity shipments.				PICTURE NAILS.			
96 to 100.....			18 00	120, \$20; No. 51, \$10; No. 50, \$27.50.				Maxwell & Sons:				Porcelain head.....per gross			
96 to 100.....			18 00	HOLLOW WARE.				10 1/2-in. high wheel.....				Brass head.....			
				HOOKS.				9-in.....				Tin and gilt, discount 75 per cent.			
				Cast Iron.				8-in.....				FINE TAR.			
				Bird cage.....per doz.	0 80	1 10		Locks.				1 pint in tins.....per gross			
								Canadian, 50 to 50 and 10 per cent.				PLANES.			
								Russell & Erwin ..per doz.				Wood bench, Canadian discount 40 per cent.,			
								Canadian, 50 to 50 and 10 per cent.				American discount 50 per cent.			
												Wood, fancy Canadian or America 37 1/2			
												40 per cent			

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English	per doz. 2 00 5 00	Bronzed iron with hooks ...	per 1,000 7 50	Plain	3 00	White, Princess, Turquoise, Blue and White	discount 50 per cent.
PLIERS AND NIPPERS.		"Eureka" tinned steel, hooks "	8 00	Coopers', discount 45 per cent.	2 80	Diamond, Famous, Premier, discount 50 and	10 per cent.
Button's genuine, per doz. pairs, discount		SAWS.		Poultry netting staples, discount 40 per cent.		Granite or Pearl, Imperial, Crescent, discount	50, 10 and 10 per cent.
37 1/2 to 40 per cent.		Hand, Diaston's, discount 12 1/2 per cent		STOCKS AND DIES.		Premier steel ware, 40 per cent.	
Button's imitation, per doz. 5 00 9 00		Crosscut, Disston's ... per foot 0 35 0 55		American discount 25 per cent.		"Star" decorated steel and decorated whit	25 per cent.
German	" 0 60 0 60	S. & D., discount 35 per cent. on Nos. 2 and 3.		STONE.		WIRE.	
PRESSED SPIKES.		Hack, complete, each 0 75 2 75		Washita	per lb. 0 28 0 60	Smooth Steel Wire.	
Discount 20 per cent.		Hack, frame only, each 0 50 1 25		Hindostan slip	" 0 06 0 07	No. 0-9 gauge.	\$2 25
PULLEYS.		SASH WEIGHTS.		Labrador	" 0 09 0 09	10 "	60 extra.
Hothouse	per doz. 0 55 1 00	Sectional, per 100 lb. 2 00 2 25		Turkey	" 0 13 0 15	11 "	120 "
Axle	" 0 22 0 33	Solid	1 50 1 75	Arkansas	" 0 15 0 15	12 "	200 "
Screw	" 0 27 1 00	SASH CORD.		Water-of-Ayr	" 0 10 0 10	13 "	300 "
Awning	" 0 35 2 50	Per lb.	0 28 0 30	Scythe	per gross 3 50 5 00	14 "	400 "
PUMPS.		SAW SETS.		Grind, 40 to 200 lb., per ton ..	25 00	15 "	500 "
Canadian cistern	1 80 3 60	Lincoln and Whiting	4 75	" under 40 lb.	28 00	16 "	750 "
Canadian pitcher spout	1 40 2 10	Hand Sets, Perfect	4 00	" 200 lb. and over	31 00	Add 60c. for coppering and \$2 for tinning.	
PUNCHES.		X-Cut Sets,	7 50	STOVEPIPES.		Extra net per 100 lb.—Oiled wire 10c.,	
Saddler's	per doz. 1 00 1 85	SCALES.		5 and 6 inch, per 100 lengths ..	7 00	spring wire \$1.25, special hay baling wire 30c.,	
Conductor's	" 3 00 15 00	Gurney Standard, 40 per cent.		7 inch	7 50	best steel wire 75c., bright soft drawn 15c.,	
Tinners'	per set 0 72	Gurney Champion, 50 per cent.		TACKS, BRADS, ETC.		charcoal (extra quality) \$1.25, packed in casks	
" hollow	per inch 1 00	Burrow, Stewart & Milne—		Carpet tacks, blued	80 and 15	or cases 15c., bagging and papering 10c., 50	
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RAZORS.		Champion Scales, discount 50 per cent.		Cut tacks, blued, in dozens only	80	hanks, 50c., in 1-lb. hanks 75c., in 1-lb.	
Elliot's	4 00 18 00	Fairbanks standard, discount 35 per cent.		1/2 weights	60	hanks \$1.	
Geo. Butler's & Co. s.	4 00 18 00	" Dominion, discount 55 per cent.		Swedes cut tacks, blued and tinned—	80 and 10	Fine Steel Wire, discount 27 1/2 per cent.	
Boker's	7 50 11 00	" Richelieu, discount 55 per cent.		In bulk	75	List of extras: In 100-lb. lots: No. 17,	
" King Cutter	13 50 18 50	Warren's new Standard, discount 40 per cent.		In dozens	75	\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—	
Wade & Butcher's	3 60 10 00	" Champion, discount 50 per cent.		Swedes, upholsterers', bulk ..	85, 12 1/2 and 12 1/2	No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.	
Carbo Magnetic	15 00	" Weightbeams, discount 35 per cent.		brush, blued and tinned	70	24, \$8—No. 25, \$9—No. 26, \$9.50—No. 27,	
Griffon Barber's Favorite	10 75	SCREW DRIVERS.		bulk	70	\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—	
Griffon No. 65	13 00	Sargent's	per doz. 0 65 1 00	japanned	75 and 12 1/2	No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,	
Griffon Safety Razors	13 50	SCREEN DOORS.		Zinc tacks	35	\$17. Extra net-tinned wire, Nos. 17-25,	
Griffon Stropping Machines ..	13 50	Common doors, 2 or 3 panel, walnut		Leather carpet tacks	55	\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,	
Lewis Bros. "Klean Cutter" ..	8 50 10 50	stained, 4-in. style	per doz. 6 50	Copper tacks	50	5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5	
Hindoo	10 50 14 00	Common doors, 2 or 3 panel, yellow and		Copper nails	52 1/2	and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.	
Orgateem's Swedish	3 50 10 00	green stained, 4-in. style	per doz. 6 75	Trunk nails, black	65 and 5	—in 1-lb. hanks, 35c.—in 1-lb. hanks, 50c.—	
Henckel's	7 50 20 00	Common doors, 2 or 3 panel, in natural		Clout nails, blued	65 and 5	packed in casks or cases, 15c.—bagging or	
Claus, 50 and 10 per cent.		colors, oil finish	per doz. 8 75	Chair nails	35	papering, 10c.	
Claus Strops, 50 and 10 per cent.		3-in. style 20c. per dozen less.		Patent brads	40	Brass wire, discount 60 per cent. off the list.	
REGISTERS.		SCREWS.		Lining tacks, in papers	10	Copper wire, discount 60 per cent. net cash	
Discount 40 per cent.		Wood, F. H., bright and steel, discount 87 1/2		" " in bulk	15	30 days, f.o.b. factory.	
RIVETS AND BURRS.		Wood, R. H., bright, dis. 82 1/2 per cent.		" " solid heads, in bulk	75	Galvanized wire, per 100 lb.—Nos. 4 and 5,	
Iron Rivets, black and tinned, 60 and 10 p. s.		" F. H., dis. 75 per cent.		Saddle nail, in papers	10	\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15	
Iron Burrs, discount 55 per cent.		" R. H., dis. 75 per cent.		" " in bulk	15	—No. 9, \$2.55—No. 10, \$3.20 to \$3.20	
Copper Rivets, with usual proportion burrs, 45		" F. H., bronze, dis. 75 per cent.		Tufting buttons, 22 line, in doz-	15	—No. 11, \$3.25 to \$3.25—No. 12, \$2.60	
per cent.		" R. H., dis. 70 per cent.		ens only	15	—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.	
Copper Burrs only, discount 30 and 10 per cent.		Drive Screws, dis. 87 1/2 per cent.		Zinc glaziers' points	5	15, \$4.30—No. 16, \$4.30. Base sizes, Nos.	
Extras on Tinned or Coppered Rivets, 1-lb.		Bench, wood	3 25 4 00	Double pointed tacks, papers ..	90 and 10	6 to 9, \$2.27; f.o.b. Cleveland. In carlots	
packages 1c. per lb.; 1-lb. packages 2c. lb.		iron	4 25 5 00	" " bulk	40	12c. less.	
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ROPE, ETC.		Per doz. net	6 00 9 00	English, ass skin	2 75 5 00	6 strand, No. 17, \$4.30; No. 18, \$2.70; No.	
Sisal	0	SCYTHES.		English, Patent Leather	5 50 9 75	19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,	
Pure Manila	0 4	Canadian, discount 40 per cent.		Chesterman's	0 80 3 00	Toronto, Montreal.	
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Cotton, 3-16 inch and larger	0 23	Canadian, discount 40 per cent.		TINNERS' SNIPS.		Galvanized barb, f.o.b. Cleveland, 2 50 2 75	
" 5-32 inch	0 25 0 27	SHEARS.		Per doz.	3 00 15 00	Galvanized plain twist	2 50 2 75
" 1 inch	0 25 0 28	Claus, nickel, discount 80 per cent.		Claus, discount 35 per cent.		Galvanized barb, f.o.b. Cleveland, \$2 30 fo	
Russia Deep Sea	0 16	Claus, Japan, discount 67 1/2 per cent.				small lots and \$2 20 for carlots.	
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Lath Yarn, single	0 10 1/2	Seymour's, discount 50 and 10 per cent.		Tin case and dairy, 75 to 75 and 10 per cent.		High Carbon, No. 9	\$2 70
Sisal bed cord, 48 feet	per doz. 0 65	SHOVELS AND SPADES.		Game, Newhouse, discount 25 per cent.		" No. 11	3 30
" 60 feet	0 80	Canadian, discount 45 per cent.		Game, H. & N., P. S. & W., 65 per cent.		" No. 12	2 95
" 72 feet	0 95	SHOVELS AND SPADES.		Game, steel, 72 1/2, 75 per cent.		WIRE CLOTH.	
RULES.		Cast iron, 16 x 24	0 85	TOWELS.		Painted Screen, per 100 sq. ft., net ..	1 50
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Emery, discount 40 per cent.		Iron, No. 492	1 90 2 25	Wright's	0 13 1/2	WRINGERS.	
Sharnett (Rutons), 5 to 10 per cent. advance		" No. 493	2 40 2 55	Brook's	0 12 1/2	Leader	per doz. 30 00 33 00
on list		" No. 494	3 25 3 40	Pipe Vise, Hinge, No. 1	3 50	Royal Canadian	24 00
		Steel, discount 60 and 5 to 65 per cent.		" No. 2	5 50	Royal American	24 00
		Try and Bevel, discount 50 to 52 1/2 per cent.		Saw Vise	4 50 9 00	Sampson	24 00
		STAMPED WARE.		COLUMBIA HARDWARE CO.		Lightning	27 00
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		vised list.		parallel (discount) 45 per cent.		WROUGHT IRON WARE.	
		Retinned, discount 75 per cent. off revised list.				Canadian make, discount 40 per cent.	

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Superior Mfg. Co., Toronto.

Steel Castings.

Montreal Steel Works, Montreal.

Steel Rails.

Algoma Steel Co.—Drummond, McCall & Co., Agents, Montreal.
Jackson, C. F., & Co., Vancouver, B.C.
Morton, B. K., & Co., Sheffield, Eng.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.

Stock Food.

Colonial Stock Food Co., Toronto.
International Stock Food Co., Toronto.
Naisbitt Co., Toronto.

Store Lighting.

Auer Light Co., Montreal.
Grose, Walter, Montreal.

Stoves and Tinware, Radiators, Furnaces, etc.

Adams Co., Dubuque, Iowa.
Batty Stove & Hardware Co., Toronto.
Canadian Heating & Ventilating Co., Owen Sound.
Davidson, Thos., Mfg. Co., Montreal.
Gies, P., Berlin, Ont.
Guelph Foundry Co., Guelph.
Gurney Foundry Co., Toronto.
Kemp Mfg. Co., Toronto.
Ives, H. R., Co., Montreal.
McClary Mfg. Co., London.
Merrick, Anderson & Co., Winnipeg.
Sterne, G. F., & Son, Brantford, Ont.
Stewart James Mfg. Co., Woodstock.
Telephone City Stoves, Brantford.
Western Foundry Co., Wingham.
Wright, E. T., & Co., Hamilton.

Stove Polish.

St. Arnaud Freres, Montreal.

Tacks.

Ontario Tack Co., Hamilton.
Wynn, T. H., Hamilton.

Traps.

Mast, J. M., Mfg. Co., Lititz, Pa.

Vises.

Lamplough, F. W., & Co., Montreal.

Wall Paper.

Staunton's Limited, Toronto.

Warehouse Trucks.

Fairbanks Co., Montreal.

Slingsby, H. C., Montreal.

Washing Machines, etc.

Connor, J. H., & Son, Ottawa.

Dowsell Mfg. Co., Hamilton, Ont.

Taylor-Forbes Co., Guelph, Ont.

Wholesale Hardware.

Birkett, Thos., & Sons Co., Ottawa.
Canada Hardware Co., Montreal.
Howland, H. S., Sons & Co., Toronto.
Kennedy Hardware Co., Toronto.

Lewis Bros. & Co., Montreal.

Lewis, Rice, & Son, Toronto.

Merrick, Anderson & Co., Winnipeg.

Window Cards and Signs.

Martell-Stewart Co., Montreal.

Wire Springs.

Henderson, J. A., Montreal.

Wallace, Barnes Co., Bristol, Conn.

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American Steel and Wire Co., New York, Montreal, Chicago.

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Dominion Wire Mfg. Co., Montreal and Toronto.

Greening, B., Wire Co., Hamilton.
Ironside, Son & Co., London, Eng.

McGregor-Banwell Fence Co., Windsor, Ont.
Merrick, Anderson & Co., Winnipeg.

Oneida Community, Niagara Falls.
Oshawa Wire Fence Co., Oshawa, Ont.

Owen Sound Wire Fence Co., Owen Sound.
Walter, E. F., & Co., Montreal.

Woodenware.

Taylor-Forbes Co., Guelph, Ont.
United Factories, Toronto.

Waggoner Ladder Co., London, Ont.

Wrapping Papers.

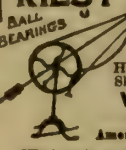

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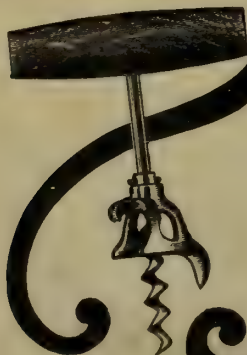
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Bown's "Newmarket" Clipper.

The Improved B. PATTERN "NEWMARKET"

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Bearing.
Rigidity and Easy Running.
Accurately Machined and
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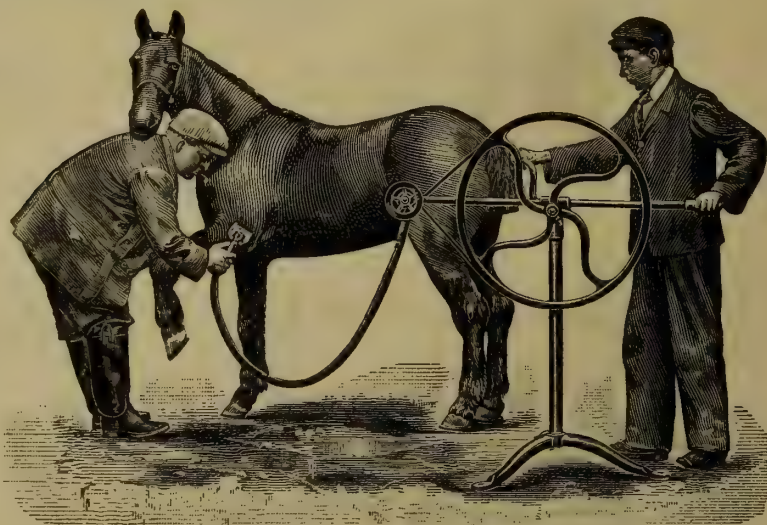
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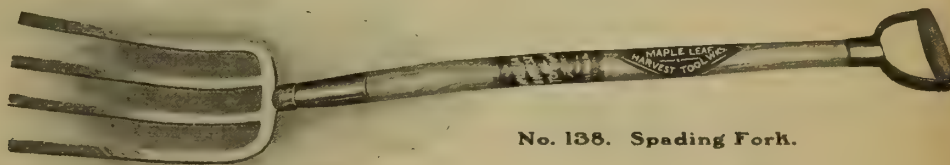
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Have You Seen Them ?

For Beauty, Finish and Quality, the
"Maple Leaf" Harvest Tools are unexcelled.



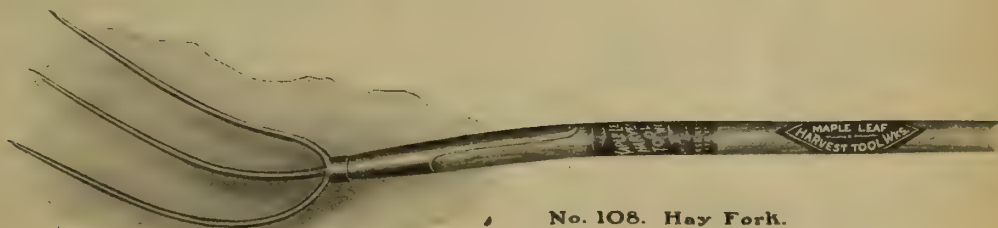
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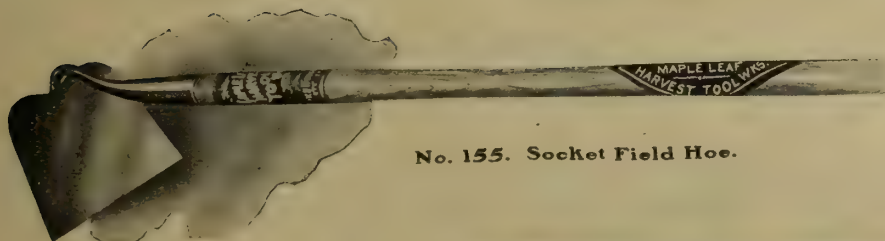
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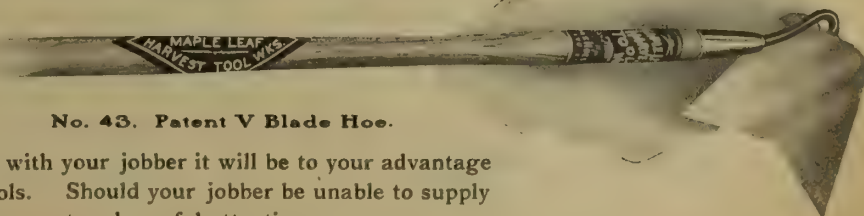
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The Maple Leaf Harvest Tool Co., Limited, Tillsonburg, Ont.



**"Pullman"
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Combine all the qualities desirable in a Door Closer. They work silently and effectually, and never get out of order. In use in many of the public buildings throughout Great Britain and the Colonies.

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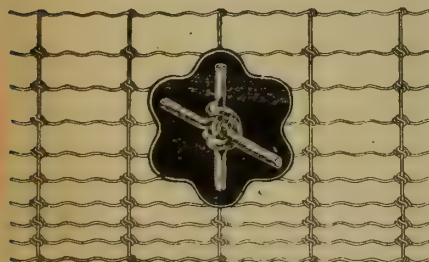
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the farmers are looking for a strong, serviceable and durable Fence at a reasonable cost. You can supply it to them in the

IDEAL



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The IDEAL is made of No. 9 Hard Steel Galvanized Wire throughout, and has many distinctive features which make it absolutely the best fence ever produced. It pays dealers to handle the catalogue of Fencing and Gates, showing styles for every purpose.

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and other Fence Wire unexcelled in quality, shipped promptly.

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Sole agents for Man. and N.W.T.



Steel Frame Support

DAVID MAXWELL & SONS

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"Maxwell Favorite Churn."

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FEATURES:**

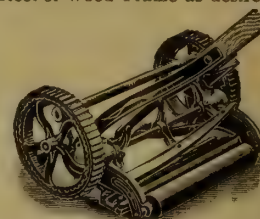
Improved Steel Stand, Roller Bearings, and Foot and Hand Lever Drive, and Detachable Driving Link. Improved for season of 1904. Steel or Wood Frame as desired.

Lawn Mowers.

High and Low Wheels, from 12 in. to 20 in. widths. Cold Rolled Steel Shafting, Crucible Steel Knives and Cutting Plate.

If your Wholesale House does not offer you these articles

SEND DIRECT TO US.



MAXWELL MOWER

8-in. Low Wheel.

Wheelbarrows.

In Four Different Sizes.

SPECIAL DROP FORGED SPRINGS

THE WALLACE BARNES CO.,

BRISTOL, CONN.

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Factory equipped with the latest improved machinery.

Make inquiries
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THOS. H. WYNN, - - HAMILTON

If **QUALITY** is what you want, buy

"Sword and Torch" Galvanized Sheets

If **PRICE** is main consideration, buy

"3 Castles and Key"

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Binder Twine

BLUE RIBBON, 650 ft. to the lb.

REDCAP, - 600 ft. to the lb.

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STANDARD, 500 ft. to the lb.

Still the Favorites of both FARMERS and DEALERS.

Nothing but Select Fibre Used.

Skilled Canadian Labor.

Our Twine is not only evenly spun, but is WELL BALLED.

This is very important, prevents tangling in Twine Box.

Write for prices.

CONSUMERS CORDAGE CO., Limited

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Mills—MONTREAL and HALIFAX.

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HARDWARE AND METAL

The Kemp Cold Blast Lantern

IS SUPERIOR FOR THE

FOLLOWING REASONS:

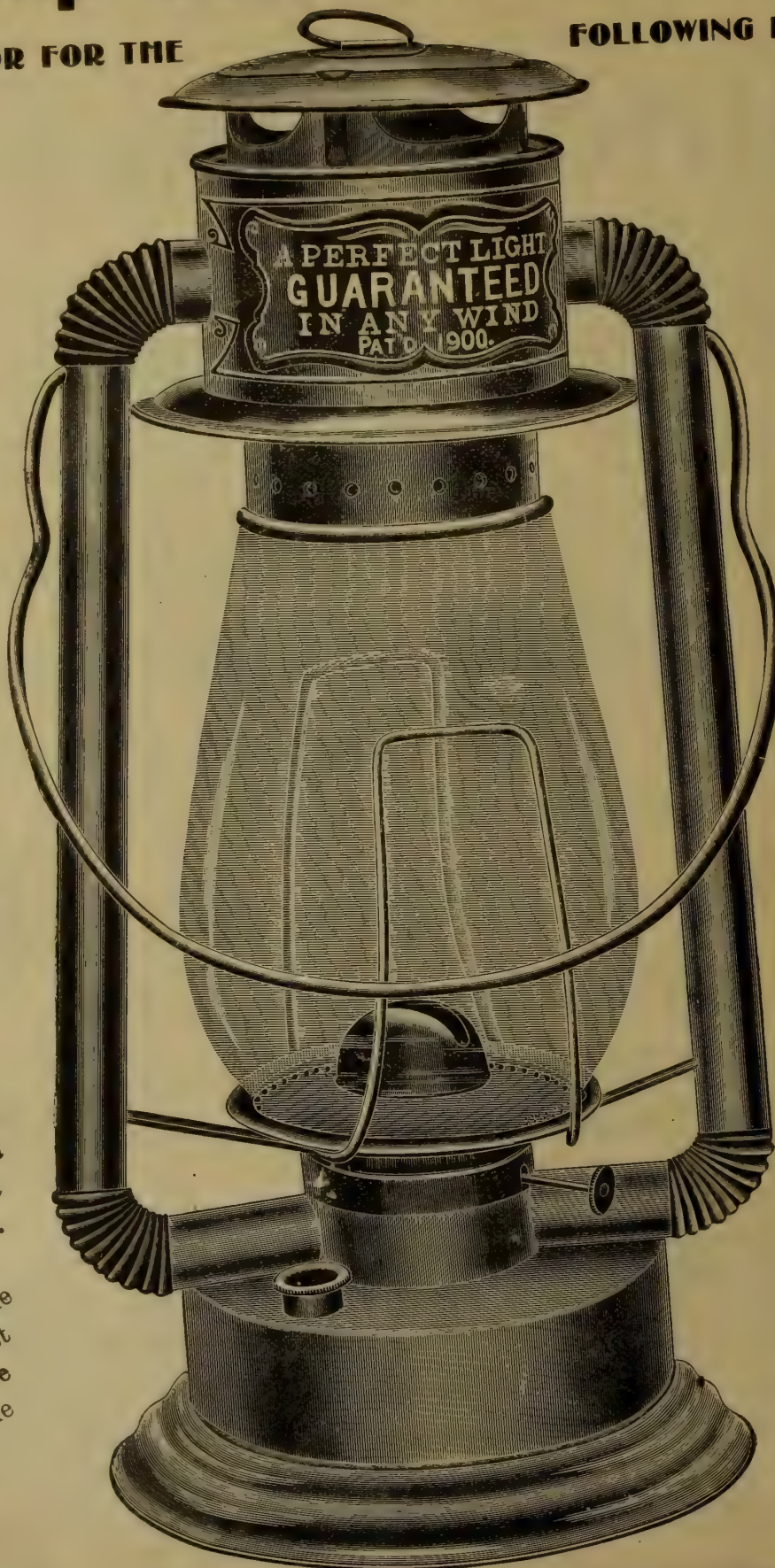
Broad and solid base.
Patented tubes are
substantial and
large and seamed
on the inside.

Wire guard com-
bined with the
tube protects the
globe; it also holds
the globe very
firmly, still the
globe is easily de-
tached for cleaning.

The globe is not
only hinged such as
used on an ordin-
ary hinged lantern,
but it is also made
to lift; it is there-
fore a combined
lift and hinge lan-
tern.

We guarantee
it to retain a
full-size flame
in a high wind.

The lantern is made
with the greatest
care and in the
strongest possible
way throughout.



Extra large and
heavy oil well.

Burner dome has
extra deep flange
and is less apt to
be displaced when
lighting or through
jolting.

A most effective
and simple device
for holding the
globe up is by
means of the bail
by simply dropping
it underneath the
guard.

We guarantee
this lantern not
to blow out.

This guarantee
is embossed on
a brass label
and attached
to every lantern.

It costs ~~no~~ more
than ~~lan~~terns of
inferior quality.

Manufactured by **KEMP MANUFACTURING CO., TORONTO, Canada**

Window and Interior Displays

Timely Hints and Suggestions

Always More Beyond.

By W. R. McColl.

WINDOW trimming is never completely learned. It is perhaps best likened to an advanced scholar, who, when he reaches what he thought was the object of his ambition, still finds so much before him that he wants to learn, and that some others already know, that he considers his own attainments mediocre indeed.

There is ever newness being evolved; some clever plan of arrangement or construction; not the result of one man's thought and study, but the conception of innumerable minds working for similar ends, and in the same direction.

The initial object in arranging a show window is to so display goods that its tenants will move out at once and for the same reason that the shoe man gave when he said, his shoes were all empty and he wanted tenants to move in at once.

TO SELL GOODS QUICKLY.

Windows should be trimmed not only to show goods well, but to sell goods—sell more goods, and do it quickly. You can trim a handsome window; and spend much time and some expense upon its construction and yet know only too well that it is not going to sell the lines upon exhibition. Why? Because you are not trying to sell goods; you are striving for effect—beauty, praise, or commendation—knowing full well at the same time that you could have handled the same materials in a manner to bring results.

SPECIAL LINES FOR SPECIAL DAYS.

While the elaborate and artistic arrangement of goods and the beauty of the blending of colors have much to do with attracting the public eye, one cannot help but notice that especially in our western Canadian towns the merchant who advertises special lines for special days, and makes his window trim (even though it be less beautiful) and window cards work with the advertisement, is the man who is forging ahead and outstripping his competitors. There are those in cities who do not follow this plan; but what works in a city is not always suitable for a smaller town

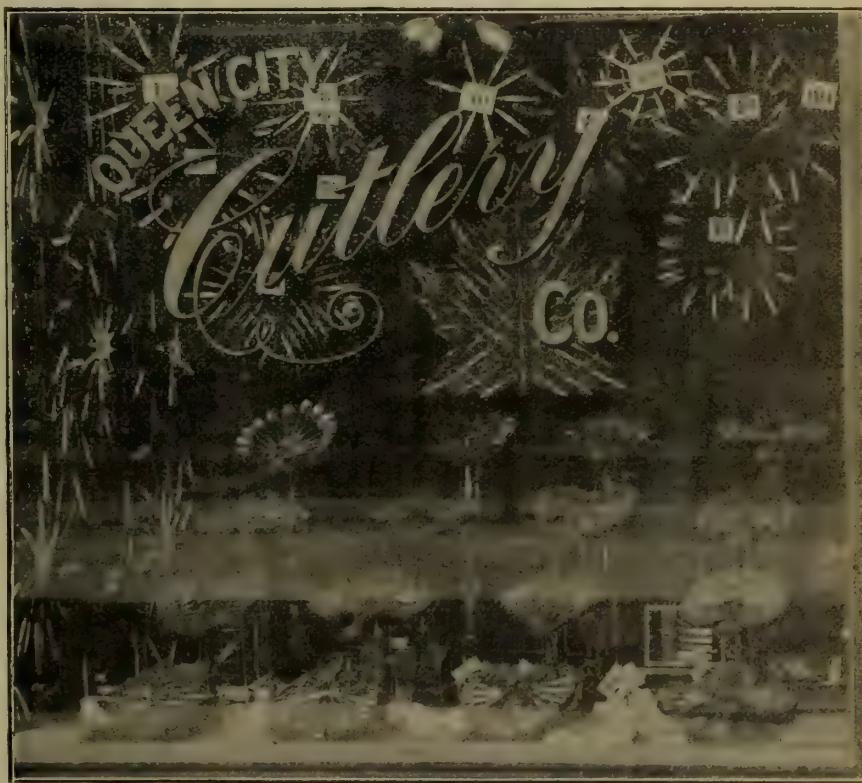
with weekly papers only to reach its clientele.

Points, many and important, are to be considered in background, and the character of goods to be used, and sold, must be taken into consideration when dressing. It takes time to develop an idea and there is the making of cards appropriate to the trim; besides the effect arrived at must be suitable, yet artistic enough to delight the beholder. The central idea, however, is something that will attract attention and sell goods

in too many instances too small to give the proper or desired effect.

The designs are frequently too elaborate for the resources of the stock; for in many instances, as soon as the trim is completed the trimmer is compelled to disarrange the display by having a customer ask for some article that composes the display.

The trimmer must be governed by these limitations; and when under these relative disabilities he produces a display that is attractive through its



A Clever Display of Cutlery.

—the idea that is radical and embodies timely suggestions is invaluable.

Dealers in minor cities and towns should give over their futile and expensive efforts for schemes beyond their resources and strive for simpler designs—effects that are artistic and within their reach.

No one but the country trimmer realizes what they have to contend with. There are many who strive to make elaborate and trade-drawing displays in their little cooped-up windows which are

beauty and well serves its main purpose of drawing buyers instead of merely curious crowds, he deserves more than passing commendation.

Some of the country stores have supplied their trimmers with modern fixtures or their equivalent, but too often neglect to allow the trimmer sufficient time to plan his displays. If the trimmer cannot get notice that he is to display so and so to-morrow and no time for him to plan, how can his employer expect artistic and uncommon work?

THE COAL TRADE OF NOVA SCOTIA.

By Hon. R. Drummond in Halifax Chronicle.

THOUGH, from the standpoint of the operators, the coal trade of the year has been more or less disappointing, it cannot well be said that it was wholly, featureless. One thing may be said of 1904 that cannot be said of any of its predecessors namely that it witnessed the sending of a fair quantity, comparatively speaking, of coal through the lakes to distant parts of Ontario. The credit for this is due to the Inverness Railway and Coal Co.

It would be rash to say that the business was a profitable one even though the boats that carried the coal took back cargoes of iron ore. These shipments may have served to prove to the Ontario people that we have coal in Nova Scotia, a fact of which they are practically ignorant.

The year, too, has demonstrated the fact that the collieries are prepared to make much larger shipments than were possible in the past, and even in excess of what will likely be required by present markets.

If, from the operators' standpoint, the year has been disappointing, it cannot be said that the workers about the collieries experienced any set-back. There has been no reduction in rates, and no diminution, rather an increase, in the pay rolls.

Take Springhill, for instance, for which I have some figures before me. The average monthly wage for the year 1903, for miners, was \$2.88 per day. While the average per day this year up till, and including, the October pay, was \$2.99. Viewed as a whole it may be asserted that after shipping began there was little broken time at the collieries. Probable output 4,650,000 tons

If the shipments for this month—December—do not show a falling off, as compared with December of last year, it will be possible to say that 1904, by hard scratching, held its own. If, however, the month shows any decrease in shipments then, I fear, 1904, will not, in shipments, be as good as 1903. The difference, in any case, will be trifling. The company showing anything like an increase is the Nova Scotia Steel and Coal Co., which may have fifty thousand tons to the good; and the company showing the heaviest decrease is the Acadia, which is over 80,000 tons behind. An approximate of the shipments by counties is:

Cape Breton County 3,250,000 tons
Inverness County 250,000 tons
Cumberland County 600,000 tons
Pictou County 550,000 tons

Total 4,650,000 tons

Or exactly the same figures as shown for the calendar year, 1903. It was estimated that 1904 would show increased shipments of three-quarters of a million tons, so no wonder if those interested in the trade are considerably disappointed.

There is nothing highly encouraging in the prospects for 1905, nor is there anything to cause worry. There should be increased sales next year, but what that increase is to be will depend wholly on the securing of additional markets. Estimate for next year

The companies are now in a position to largely increase their output. It is asserted, in some quarters, that the Dominion Coal Co., is good, all alone, for 5,000,000 tons. But then these days the language of some in Cape Breton is lofty. Five million tons a year means a daily output from the collieries working 300 days in the year, of close on 17,000 tons. They might do that on odd occasions, in the Summer shipping season, but a high average for the year would be 12,500 tons per day, and that would give only 3,750,000 tons.

Let me put it at 3,500,000 and the other mines in Cape Breton Co. at 500,000 tons more that would give a total of 4,000,000. Cumberland should take care of three-quarters of a million; Pictou of a similar quantity, and Inverness of 350,000 or a total of 5,850,000 tons or say 1,200,000 tons over this year.

That is what the collieries combined could do, but it is likely far above what they will do, for the reason that they don't know where to market all they can produce. And it must not be forgotten that there are new concerns which expect to be able to put considerable coal on the market next year.

Markets must be sought out. This work will devolve on the larger companies. The president of the Dominion Coal Co. assures us that a new market is to be found in Mexico, and that he is laying plans to capture a share of the Ontario market from the Yankees. Mr. Ross when he talks, does so to good purpose, except when he is talking to the stock market, with which he has a merely passing acquaintance, and this talk of sending coal into Toronto must

mean something, but just what it means I am not prepared to say.

Only large markets available

It is pointed out that there are only two large markets possibly available, Ontario and, or, New England. The Ontario market is the one the operators are likely to strive for. To secure a footing there means that the Government must deepen the canals, give subsidies to steamers, and remit part of the royalty. If the Government will do all these, then the operators are ready to go in and possess the land.

To secure a market in New England means no Government assistance, and the expenditure of large sums of moneys by private corporations, in the building of terminal facilities, the erection of discharging plants, and the building of store room.

And so if the operators would prefer the Ontario market, secured by Government assistance, who can blame them? The subject of new markets is an important one, and will become more pressing as the days go on.

CALENDARS AND SOUVENIRS.

A neat little desk calendar, bearing a pretty maiden's head, has been sent out by the Crown Life Insurance Co. It can either be hung up or set up on the desk. The head office of the company is in Toronto.

The National Trust Company, Limited, Toronto, have issued a serviceable calendar, executed in quiet brown tints, with figures standing out prominently in white. Readers of this paper can secure copies on request.

The Canada Metal Co. are issuing a neat blotter as a holiday souvenir. It consists of several sheets of blotting paper with a handsome celluloid cover. Readers of Hardware and Metal can secure one of these blotters by writing to the company at 31 William street, Toronto.

The John Morrow Machine Screw Co., Limited, Ingersoll, Ont., have sent out

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited,
HAMILTON, ONT.

their calendar for 1905. The calendar is the same in design as their previous ones, consisting of 12 large sheets, one for each month, printed in 2 colors, black and red. On each sheet is illustrated and described some of the machine screws manufactured by this firm. This is a most useful calendar for the shop, factory, warehouse and office.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

A Charming Calendar.

ONE of the prettiest calendars this year is that presented by the Kerr Engine Co., Limited, Walkerville. In soft tints, the beautiful painting by Bell, "The Twilight Hour," has been reproduced and mounted on an appropriate dark-colored card. The calendar tab harmonizes with the mount and the only reference to the Kerr Engine Co. is to be found in a few letters in silver on the top corner of the card. The calendar measures about 12 by 16 inches and is well worth possessing.

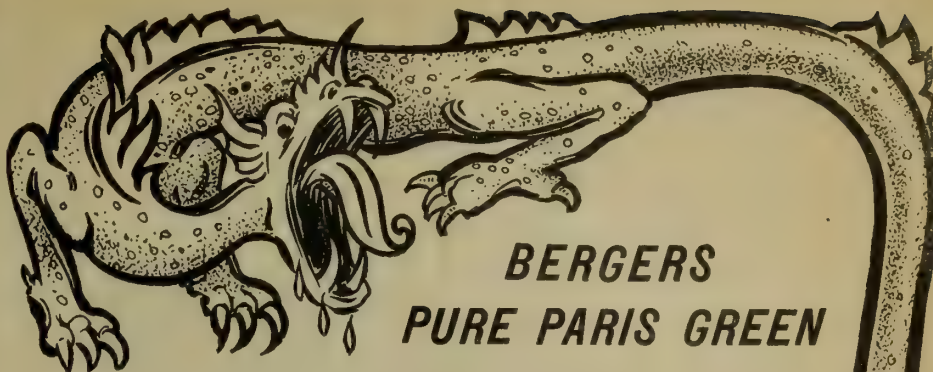
Purvis Bros'. Calendar.

Purvis Bros., wholesale and retail dealers in shelf and heavy hardware, Sudbury, Ont., are distributing a very striking calendar, 12x14 inches. The calendar is in pad form attached at the bottom. It can readily be removed at the end of the year thus leaving the pictorial part intact. This latter represents one of Spain's beauties.

Franklin Water Tube Boiler.

The Franklin Boiler Works Co., Troy, N.Y., are sending out a handsome catalogue illustrative and descriptive of their water tube boilers. There are distinctive features about this boiler. It is constructed of wrought steel throughout, and consists of one or more drums with waterlegs connected by tubes parallel to the drum. These tubes are expanded into the plates of the waterlegs.

As the water heats it rises in the tubes to the drum and is replaced by cold water from the rear waterleg. The direction of the furnace gases is determined by a row of tiles resting on the lower tubes and extending to within a few feet of the boiler, and by a similar row of tiles placed on the top tubes extending from the back to within a few feet of the front. The steam nozzle is situated at the front of the inclined drum where there is the greatest space,



BERGERS PURE PARIS GREEN

Is uniform in quality, is absolutely pure and thoroughly reliable—kills every time.

Paris Green is used for a purpose which makes poor grades worse than useless. It's a question of death to the bugs or death to the crops.

S.W.P. Agents who have any Paris Green trade in their locality should sell only the best—that's Bergers. It never fails to do its work and it never fails to make friends for the dealer who sells it.

We have a plan this year for getting Paris Green trade for our agents that is sure to bring in the business. With every thing we make or sell we believe that *good quality* must be backed up with *good advertising*.

Write us today about our Paris Green proposition. It's a winner.



THE SHERWIN-WILLIAMS CO. PAINT AND VARNISH MAKERS.

Canadian Headquarters and Plant: 639 Centre St., Montreal
Warehouses: 86 York St., Toronto; 147 Bannatyne St., East, Winnipeg, Man.

and, therefore, the place to get the driest steam. To insure dry steam, a separating device, consisting of a deflecting plate and perforated pan, are placed below the steam nozzle.

Canadian Westinghouse Co., Limited.

The Canadian Westinghouse Co., Limited, Hamilton, Ont., are sending out circulars Nos. 1035 and 1090. Circular No. 1035 deals with the Westinghouse No. 12A railway motor. It is a 16-page circular, and all parts of the motor are illustrated and described in detail. Three efficiency, horse-power and speed diagrams are shown besides line drawings illustrating the nose suspension and the parallel bar suspension.

Circular No. 1090 deals with Westinghouse railway controllers. It is an 8-page circular in which is described three styles of controllers, the series parallel controller, the series parallel

controller with emergency brake (electric), and the series parallel controller for regular electric braking service.

The J. H. Ashdown Hardware Co., Limited.

Something unique in Canadian hardware catalogues has been issued by The J. H. Ashdown Hardware Co., of Winnipeg. Canadian hardware men are accustomed to ambitious efforts in the catalogue line from our wholesale houses, but this new catalogue has features which are deserving of special attention. In the first place it is constructed on the loose leaf system, the object being to keep it at all times correct, complete, and up to date. It is strongly bound, and the insertion of new pages is easily accomplished. The preface points out that "when bound in the ordinary manner a catalogue is out of date and incorrect in a very few months, and it is certain that the usual correction slips to be inserted with the

and of a paste pot are impractical. New leaves for this book will be mailed at intervals and, as they can be substituted for the old ones with very little trouble, we hope the trade will show their appreciation of our desire to supply them with a modern hardware catalogue by making these necessary changes at once. If our catalogue is handled with ordinary care and the substitutions are promptly made, it will be just as correct and just as valuable 10 years hence as it is now."

The catalogue is divided into seven distinct sections, such as mechanics' tools, builders' hardware, miscellaneous hardware, etc. Provision is made for the insertion of additional matter in each section without rendering the index incorrect. Thus some 200 pages are assigned to mechanics' tools in the numbering of the pages, while only 168 are required at present. Additional leaves can be inserted at the end of this section without disturbing the paging of the next section which begins with 201. No doubt new index sheets will be supplied from time to time to keep the index up to date. It should be mentioned in passing that the index is most complete and exhaustive.

A useful feature of this catalogue is the fact that the weights of the various lines of goods are given to enable the purchaser to estimate freight charges. In most cases these weights include the weight of the packages in which the goods are shipped. As the methods of packing must necessarily vary greatly, the weights given are to some extent approximate, but they should be a valuable guide for all ordinary purposes.

It is unnecessary to add that the catalogue is complete. To use an expressive word—but one often abused in this connection—it is encyclopaedic. It embraces every line which the hardware store is likely to handle, and it is, therefore, a valuable book of reference. The typographical work is a credit to Winnipeg where all the work was done. Retail hardware men in the West should write for a copy.

Baldwin-Westinghouse.

The Canadian Westinghouse Co., Ltd., are sending out circular No. B-W 1000, describing and illustrating in detail the Baldwin-Westinghouse electric locomotive. It is a circular of 39 pages.

The use of electric locomotives is becoming rapidly more extensive, and the service in which they are engaged is of great variety. They are used in railroad service for inside work where smoke from a steam locomotive would be objectionable, for mining service, etc.

The description given of the locomotive, both mechanical and electrical, is both interesting and instructive, and

HAS A "GRIP" ON THE TRADE.

IVER JOHNSON Revolver Grip.



Progressive dealers instantly recognized its value—the demand was spontaneous. As the result of extensive advertising there is already a large demand for this revolver.

Have you placed your order?

"DON'T CARRY IT" — "WILL SEND AND GET IT" —

"INTEND TO HAVE IT"



are signs that —————> point to the door of your competitor, who, being alert and keen, realizes that "New Things" impart life and activity to his business and who instantly recognizes the practicability and selling virtues of the

IVER JOHNSON Revolver Grip

Send for new catalogue just issued — a work of art — mailed free upon application.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS., U.S.A.

any one interested in transportation should not fail to secure one of these circulars.

COMMERCIAL TRAVELERS' AT-HOME.

On the evening of December 27, the Northwest Commercial Travelers' Association held their annual "At Home" in the Manitoba Hall in Winnipeg. The function was a most successful one, the large number of guests present pronouncing it one of the most enjoyable dances of the season. Visitors from outside Branches of the Association carried away pleasant memories of a most enjoyable evening.

The hall was tastefully decorated for the occasion, and while the attendance was large, it was not overly so, the crowd being such as to make dancing a pleasure. The committee in charge are to be congratulated on the success which attended the function. It consisted of the following gentlemen:—

John Horne, F. H. Agnew, L. L. McGowan, D. K. Book, E. Dagg, N. Musgrave, A. G. Randall, J. H. Murphy, A. E. Wayte, F. M. Morgan, L. C. McIntyre, W. E. McNamara, W. H. Walker, E. Bowman, E. L. Thomas, chairman of committee, and J. M. Lamb, secretary.

INQUIRIES FOR CANADIAN TRADE.

The names and addresses of the firms making the following inquiries may be had by application to the Department of Trade and Commerce, Ottawa, or to the Editor of this paper. Parties answering inquiries will be careful to mention the office under which said inquiry appears and the number.

The following inquiry concerning Canadian trade has been received from the High Commissioner for Canada:

182. A firm of electrical engineers and contractors have asked to be placed in touch with electrical firms in Canada with the object of introducing their machinery.

The following inquiry has been received from the City Trade Branch of the High Commissioner's Office, London, Eng.:

112. A hardware manufacturer's agent with office and show-rooms in London, who has been handling American goods, is open to represent Canadian manufacturers wishing to develop an export trade in such lines as electric tramway equipment, builders' hardware, including locks, etc., light farming tools (hay and other forks, hoes, rakes and garden tools), hinges of wrought steel for building purposes, wood screws, enamelled bath tubs, lavatories, etc., tools, carpenters' and joiners' sanitary ironware, woodenware, such as broom handles, washboards, clothes pegs and closet seats.

January 7, 1905

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO. LIMITED

HARDWARE MERCHANTS

Wholesale
only

138-140 WEST FRONT STREET, TORONTO

Only
Wholesale

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LUMBERMEN'S SUPPLIES.

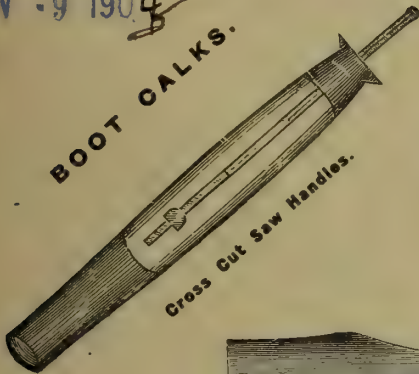
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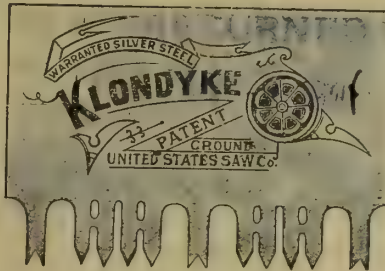
JAN -9 1904

BOOT CALKS.

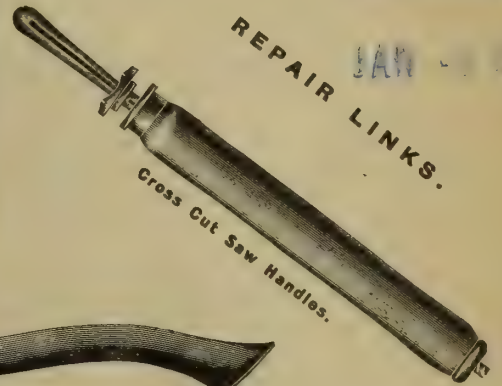
REPAIR LINKS.



Cross Cut Saw Handles.



Cross Cut Saws.



Cross Cut Saw Handles.



Axe Handles.



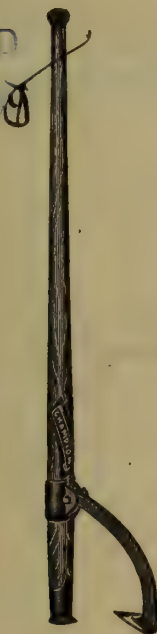
Narrow Cross Cut Saws.

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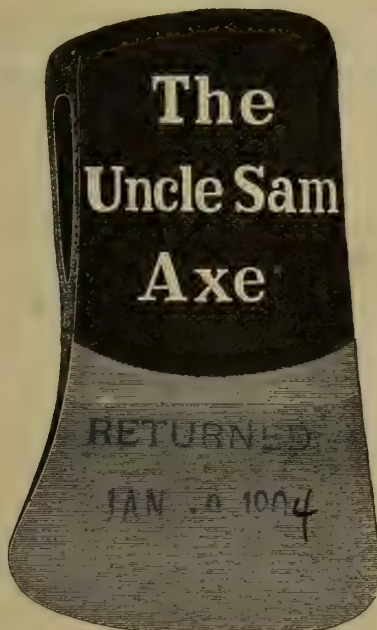
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LOGGING
CHAIN.

Cut Book at
Page 49
CO. CHAIN.



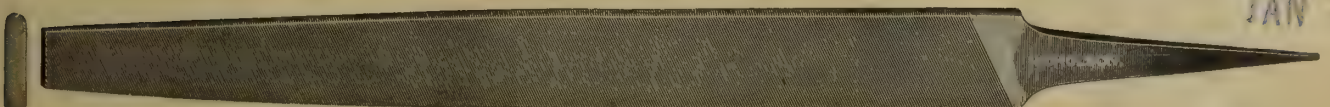
Cant Hook.



Chopping Axe, Single and Double Bit.



Peavies.



"Nicholson," and "Kearney & Foote" Files.

FOR FULLER PARTICULARS ON LUMBERMEN'S TOOLS, SEE OUR HARDWARE CATALOGUE.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

Our prices are right.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

We Ship Promptly



Go to your Shelves

pick up a can of Gillett's Lye, read over the many uses enumerated thereon, and then go to your next customer **properly informed**. Easy now to sell

Gillett's Lye

to practically every customer whom you serve. 50c. extra profits per day is not to be sneezed at.

E. W. GILLETT COMPANY LIMITED
TORONTO

1905 PAINT TRADE

You will want for this year a paint with a reputation; one that will gain customers and keep them. Why not work along the lines of

RAMSAY'S PAINTS

always giving satisfaction, always selling at a price that is just right, not too low, not too high. Always bringing you profits and gaining customers. A store always looks bright and interesting when decorated with Ramsay's advertising cards.

Will you think about it?

A. RAMSAY & SON COMPANY
Estd. 1842 **MONTREAL.** The Paint Makers

Do You Carry our Line of . . .

Superior Valves and Steam Specialties ?

These lines are without an equal in the Dominion.

The steam specialties are of the very highest class and is a very profitable line to handle. The fact that nearly 2,000,000 of our J.M.T. Valves are in use to-day and are giving entire satisfaction, marks this valve as the leader. The line offers a wide margin of profit to the dealer, and is the most comprehensive in Canada.

We also carry the best as well as the most extensive line of Gas and Electric Fixtures in Canada, and we want you to give us a chance to show you that we can give you better goods for the same money and the same goods for less money than are offered elsewhere.

The James Morrison Brass Mfg. Co., Limited
TORONTO, ONT.

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Jan. 6, 1905.

ACTIVITY has increased in the plumbing trade in a surprising manner during the holiday season. The advance in copper has had its effect and the probabilities are now that it will go higher still. Future quotations on brass will likely be advanced also.

From the big wholesale dealers and manufacturers of plumbers' supplies it is learned that quite a supplementary improvement has taken place all over the trade. The changeable weather from warm to cold, and vice versa, has had its deadly effect upon the piping and plumbing fixtures of not only new houses but of all houses, and especially large buildings in the course of construction. Prices generally are unchanged.

Range Boilers—Considerable demand has been noticed for these and some orders have been placed for future business. Prices are as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—A very market has existed for lead pipe and as pig lead advanced instead of declining there may be some chance of an increase in price for lead pipe. Our quotations are as follows: Discount 30 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—The demand for these goods has not abated in the slightest and right through the holidays business kept up in large volumes. Our quotations are as follows: Soil pipe, standard, 50 per cent. and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—Plenty of business is being done and stocks are being cleaned up with a strong market and unchanged prices. We quote: Discounts on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—Prices remain unchanged but firm and the demand is excellent. Our quotations are as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per

cent. discount; nipples, 1-4 and 3-8 in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Jan. 6, 1905.

OWING to quietness in the building trade few large orders have been received. However, a few assorted orders are arriving which indicates that there is a fair amount of jobbing work being done. Trade is expected to brighten up next week when the majority of wholesale houses send their travelers on the road. Prices are all firm and a general advance is expected to take place next week. The large orders which have been received this week are purely local, and had it not been for the increased amount of building in the wholesale district this year, trade, indeed, would have been very quiet.

Lead Pipe—Trade conditions continue unchanged. Demand is fair, and prices continue unchanged. We quote: Lead, 7c; lead waste pipe, 8c; discount 30 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—A fair demand is current. Prices are firm and unchanged. We quote nominally: Malleable fittings 20 per cent. for American and 35 per cent. for Canadian; cast iron (standard), bushings, 65 per cent.; headers, 60 per cent.; flanged unions, lipped, 60 per cent.; malleable bushings, 57 1-2 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—Trade is quiet. The discount continues unchanged at 15 per cent.

Galvanized Iron Range Boilers—Trade is quieter. Prices are firm and continue unchanged. Our quotations are: 12 gallon capacity, standard, \$4.50; extra heavy, \$6.50; 18 gallon, standard, \$4.75; extra heavy, \$6.75; 24 gallons, standard, \$4.75; extra heavy, \$6.75; 30 gallons, standard, \$5; extra heavy, \$7.50; 35 gallons, standard, \$6; extra heavy, \$8.50; 40 gallons, standard, \$7; extra heavy, \$9.50; 52 gallons, standard, \$11; extra heavy, \$14; 66 gallons, standard, \$18; extra heavy, \$20; 82 gallons, standard, \$21; extra heavy, \$24; 100 gallons, standard, \$29; extra heavy, \$34; 120 gallons, standard, \$34; extra heavy, \$40; 144 gallons, standard, \$47; extra heavy, \$55.

Iron Pipe—Trade is fair. The market is steady. Prices continue unchanged. Our quotations are: Black, 1-4 inch, \$2.04; 3-8 inch, \$2.06; 1-2

inch, \$2.30; 3-4 inch, \$2.88; 1 inch, \$4.13; 1 1/4 inch, \$5.63; 1 1/2 inch, \$6.75; 2 inch, \$9. Galvanized, 1-4 inch, \$2.86; 3-8 inch, \$2.89; 1-2 inch, \$3.15; 3-4 inch, \$4.03; 1 inch, \$5.78; 1 1/4 inch, \$7.88; 1 1/2 inch, \$9.45; 2 inch, \$12.60.

Solder—Market strong and prices firm. We quote: Bar solder half and half, guaranteed, is quoted at 17 3/4c; wiping solder at 15 1/2c, and refined 16 1/4c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 51-2 feet, 21-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 21-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D A quality, \$5.20; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

Bathtubs in Hotels.

HERE is rapidly approaching completion on Broadway, a hotel building which has certain peculiarities of architecture which attract the attention of many who pass. The most striking thing about it, says an exchange, is the small number of large windows and the large number of small windows. The large windows are single, rather than double, and on either side of each large window is a small one. One is at a loss to account for it, unless one happens to see a sign on the corner of the building, which says that So-and-So hotel will be opened shortly with "300 rooms and 200 bathrooms." The small windows, of course, indicate the bathrooms. "They might have called it the Bathtub Hotel," remarked an old hotel man, as he studied the building from the opposite corner. "It is the most impressive evidence I have yet seen of the American craze for bathing. I can remember the time, and it was not so many years ago at that, when hotels thought they were well equipped if they had one bathroom on a floor, and we charged a quarter for towels and service. This new hotel, with nearly as many bath as guests' rooms, shows to what extreme the traveling public has pushed the 'room and bath' idea. If it keeps on some enterprising hotel man will be offering a room and two baths, and he'll find plenty of occupants."

Plumbers Celebrate.

ON the evening of December 27th the employes of J. L. Wells & Co., plumbers and steamfitters, of Winnipeg, Man., were entertained at dinner at the Parisian cafe by the head of the firm. Covers were laid for fifty-

six and an enjoyable evening was spent. Before the assembly broke up Mr. Wells was presented with a gold chain and locket and appropriate speeches were made. Mr. Wells was referred to as the pioneer steamfitter of the Canadian west as he commenced business in Winnipeg 24 years ago. He installed the plumbing in the old Knappen and Henderson blocks and in the old Ontario Bank building now occupied by the Commercial Club.

When the regular toasts had been honored the function concluded with a musical programme in which the following took part: B. Hickman, T. M. Ketchen, J. Sells, J. Cantline, T. Merden and T. Kerr.

A Large Plumbing Job.

HERE are records of many large plumbing contracts, but the one which is now being completed by Armbruster & Farrell, Chicago, is without doubt the record breaker. Two years ago when the town of Pullman was taken into the corporate limits of Chicago this firm were given the contract of overhauling the entire plumbing system of the town by the Pullman Co., who own the great majority of the thousand houses in the town. This was necessary before the town could be admitted within the city limits because certain flagrant violations of the city's plumbing regulations were reported by the sanitary inspectors.

By the time the contract is completed Armbruster & Farrell will have received in the neighborhood of \$200,000 for their contract.

The number of plumbers regularly employed on the job amounted to about twenty-five. However, at times several times that number have been employed.

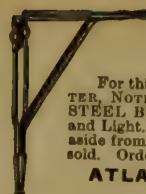
Building Notes.

Blonde Bros., Chatham, have received the contract for the erection of a new Roman Catholic church in Stratford which will cost in the neighborhood of \$20,000.

Geo. Goodwin signed the contract for the erection of the National Museum at Ottawa, on December 28. The new structure will cost \$990,000, and will not be completed for three and a half years.

As soon as the building season opens up in Montreal, permits will be granted to the Mount Royal Club, the McGill Union, Alexandra Hospital, Eastern Townships' Bank, Birks building, Lindsay building, and a convent on Papineau avenue.

An implement firm of Portage la



Will Hold Up a Shelf!

That's what a shelf bracket is for. For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,
New Haven, Conn., U.S.A.

R. E. THORNE, 768 Craig St., Montreal.

BRONZE POWDERS,
BRONZE LIQUIDS,
MAROON JAPANS, ETC.

Toronto Office: 29 Melinda St.

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Hot Water Fitter
and Metal Worker

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Salt Glazed Vitrified



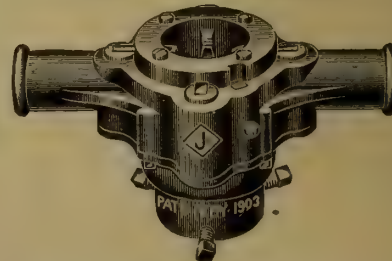
Double Strength Culvert Pipe
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THE CANADIAN SEWER PIPE CO.

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JARDINE PATENT PIPE DIES

Make Hard Work Easy.



The Herbert Jones Co., Steamfitters, Hamilton, Ont.
say:—With this Die one man is quite capable of accomplishing what formerly took two men to perform.

A. B. JARDINE & CO.
Mfrs. TAPS and DIES.

HESPELER - - - ONTARIO

PIPE THAT IS PIPE

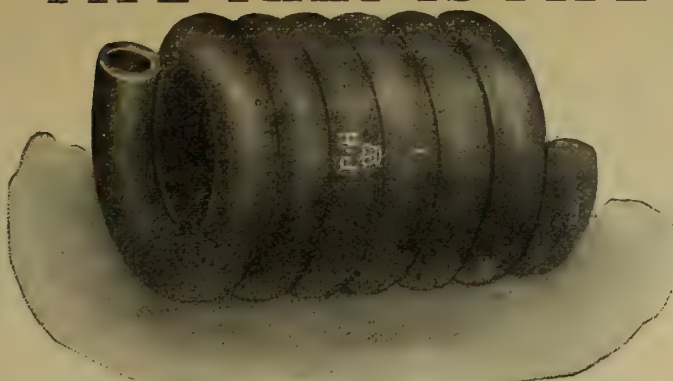
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You Want It.

See that You Get It.



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BLACK AND GALVANIZED.

TAKE NO OTHER.

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Have you
tried it?

Tried what?

SELLING
MANTELS.This is in your line of business, and it will
pay you.The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

SPECIFY



INJECTORS

PENBERTHY INJECTOR Co.,

LIMITED.

BRASS MFRS.

Windsor, Ont.

WHY NOT BUY

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ard and Copper Alloy
Discs, Steam and Hot
Water Radiator
Valves, Brass and
Iron Weber Gate
Valves, Check Valves,
etc.V
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?THOSE WHO DO GET SATIS-
FACTION.
SEND FOR CATALOGUE.THE KERR ENGINE CO.,
WALKERVILLE, ONT. Limited*The Standard Ideal Sanitary Co., Limited*

MANUFACTURERS OF

Porcelain Enamel Bath Tubs Lavatories Sinks Slop Hoppers

"MADE IN CANADA."

Porcelain Enamel Bath Tubs,Porcelain Enamel Sinks,Porcelain Enamel Lavatories,Porcelain Enamel Lipped and Plain Urinals,Porcelain Enamel Slop Hoppers,Porcelain Enamel Factory Wash Sinks.

THE ONLY MANUFACTURERS OF ENAMELLED WARE IN CANADA

Head Office and Factory:

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Trade Mark.

Trade  Mark.

RETURNED

JAN - 1904

Cut Back
Pages

J. D. Liff

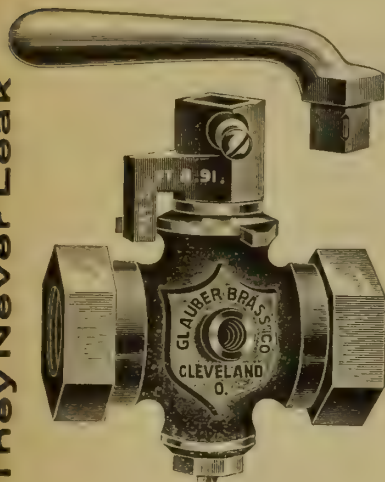
INTERCHANGEABLE GUN.
GUNS OF ALL DESCRIPTIONS.

F. W. LAMPLOUGH & CO.,

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GLAUBER

GUARANTEED



They Never Leak

Always Work Easy

BEST IN THE WORLD



"OH, YES!"

THE
Banner

LEADS.

QUALITY
TALKS.Take the Best
at the
Same Price.

LARGEST OIL WELL, BRIGHTEST LIGHT.

For sale by all prominent dealers Made by the

Ontario Lantern & Lamp Co.,

HAMILTON, ONT.

Prairie have purchased property with the intention of erecting a large building as soon as Spring arrives.

Tenders are being received for the erection of a new C.P.R. hotel at Vancouver.

A church costing over \$100,000, will be erected by the Roman Catholics in Winnipeg, shortly.

A new C.P.R. depot will be erected very shortly at Estevan, Assiniboia.

The Chillicite Chewing Gum Company, of the United States, intend erecting a factory and warehouse in Toronto.

Tenders are being received for the erection of a new hotel in Stratford.

Building Permits.

TORONTO.

Geo. Rennie, dwelling, No. 32 Russett avenue, \$1,800.

Jas. Henderson, dwelling, No. 54 Madison avenue, \$10,000.

Mrs. J. Kent, dwelling, No. 119 Gore Vale avenue, \$2,000.

H. Love, dwellings, Smith street, near Logan avenue, \$2,800.

T. Osler, alterations to dwelling, No. 6 Rosedale road, \$3,000.

T. Crow, factory, corner of Yonge and Isabella streets, \$25,000.

J. Brick, dwelling, Victor avenue, near Broadview avenue, \$3,000.

E. W. Trent, dwelling, Eastern avenue, near Pape avenue, \$1,500.

E. & H. Nerlich, warehouse, No. 135 Wellington street west, \$40,000.

W. Nash, dwellings, Galley avenue, near Roncesvalles avenue, \$11,400.

J. D. Farquhar, dwellings Gildersleeve avenue, near Sumach street, \$6,500.

H. H. Hall, dwelling, corner of Bathurst street and Barton avenue, \$3,500.

B. H. Morehouse, dwellings, First avenue, near Broadview avenue, \$7,000.

F. C. Jones, addition to dwellings, Blank street, near Dufferin street, \$3,000.

Baxter Advertising Co., alterations to store, corner of Yonge and Adelaide streets, \$4,000.

CONCRETE BLOCK
MACHINES!BEST ON THE
MARKET.WRITE FOR
PRICES.

R. TAGGART, 265 Church Street Toronto

IMPORTERS, ATTENTION

Save money by consigning your importations direct to destination and pay through freight charges only Have your goods cleared and distributed by

Turnbull & Henderson

Customs Brokers, Forwarding and Distributing Agents
Vancouver, B. C. Satisfactory service guaranteed.

TRADE WITH ENGLAND

Every Canadian who wishes to trade successfully with the Old Country should read

"Commercial Intelligence"

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$1.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

Buy the Best.



HERCULES

Sash Cord.

Star Brand Cotton Rope
Star Brand Cotton Clothes Lines
Star Brand Cotton Twine

For Sale by all Wholesale Dealers.

To Manufacturers' Agents:

HARDWARE AND METAL has enquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of enquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager

HARDWARE AND METAL

Montreal and Toronto



"FIRE"
WILL NOT SPREAD, AND SPARKS OR CINDERS HAVE NO EFFECT ON

REX Flintkote Roofing.

It is the most fire-resisting roofing known, and it is endorsed by fire underwriters everywhere as possessing the most fire-resisting qualities. On this account, especially, it is fast replacing shingles and becoming the universal roofing. It is durable, waterproof, economical, and anyone can lay it. Our samples and book that tells all about roofing is yours for the asking.

J. A. & W. BIRD & CO.,
47 India Street, Boston, Mass.

"LOOK FOR THE BOY" EVERY ROLL

THIS IS THE OLD STAND-BY

None better on the market unless it is the Triumph.

If your Jobber cannot supply, write us for prices.



NO. 233.—WILCOX TACKLE-BLOCK WIRE STRETCHER

WILCOX MFG. CO. OF ONTARIO, Limited



ALUMINUM

Seamless



TEA KETTLES

ARE THE
BEST

Why?

Because they stand the heat of either Gas, Coal or Wood fires better than anything else, they will not rust, and there is nothing to chip off.

An Aluminum Kettle can boil dry on an ordinary fire, get red hot and not be affected in any way. With a little care they can be kept as bright as silver.



MANUFACTURED BY

CANADIAN ALUMINUM WORKS, LIMITED,

Factory and Foundry:
Chambly Canton, P. Q.

MONTREAL

Office:
13 St. John Street.



ELECTRICAL GOODS AND SUPPLIES

The Principles of Exchange Telephony.

TELEPHONE service is a very general term. A study of the details which go to make up what is generally known as telephone service is seldom pursued by those who look at the subject merely from a general point of view. Much confusion has been created in the consideration of telephony by the early adoption of a wrong unit. The telephone subscriber, or the telephone instrument, has generally been considered to be the unit of the telephone business, and this fallacy not only exists in the mind of the man in the street, but unfortunately it has also often been adopted by those who construct and manage telephone systems. The object of a telephone system is to make telephone connections, and the telephone connection, or message, is the real unit of the business, not the telephone subscriber.

Let us consider first the effect of the fallacious unit on the science of telephony. The adoption of the telephone subscriber as the unit, leads to the desire for an expert telephone subscriber at every telephone instrument, and, since the wish is the father to the thought, many telephone systems are planned as if an expert subscriber could be counted upon to be always present at every telephone instrument. This leads to a reliance upon the subscriber to perform a certain series of actions every time he uses the telephone, in order that the plant may be properly worked. This reliance is not justified by the practical conditions of the telephone service, for the reason that an expert user is by no means present at every telephone every time it is used.

There are many reasons which make such an ideal impossible in actual practice. The telephone population of any city is constantly changing. Old subscribers are constantly giving up the service for one reason or another and new subscribers are constantly coming on. In very many cases, probably in the majority of cases, any given telephone is available to a number of different people, and is used daily by a number of different people. Under these conditions, which are most obviously true, it is quite impractical to count for the correct working of a telephone system upon the presence of two expert users,—for two users are concerned in

a telephone connection,—for every telephone message.

The proper unit of the local telephone service is the message, and if the operation of a telephone system is studied with the object of determining the best means of handling the message, or individual telephone connection, a very different point of view is obtained from which to study both the general working of the service and the engineering design of the system.

A popular description of a telephone exchange system would be that it is a plant for the manufacture of telephone connections, and clearly the aim must be to manufacture accurate, complete and perfect telephone connections as rapidly and as economically as possible.

Every manufacturer bends his efforts towards organizing skilled labor and acquiring the labor-saving machinery best adapted to his purposes. He does not make the mistake of relying upon a general mass of unskilled and unorganized labor for important steps in the completion of his product. The telephone system which relies upon the subscriber or user to perform important steps in the operation of the plant makes just the mistake which no intelligent manufacturer would dream of making.

In order to study the operation of a telephone system from the correct point of view, regarding the message as the unit of the work, we must consider the work which a telephone plant is called upon to do and the manner in which it does its work. The work primarily is the making and unmaking of temporary connections between numerous individual lines. The operations attendant on the making and unmaking of these connections involve other important points.

Each line must possess a means of signalling the exchange at the beginning and at the end of each connection, and the exchange must possess means for signalling the stations at the ends of the lines. It is important that the signals be easily, rapidly and accurately operated. It is on the machinery for working these signals, for rendering them accurate and automatic, and for giving them a distinct and unmistakable meaning that inventive effort in telephone engineering has chiefly been exercised.

One most important point about a

telephone connection is that it must be unmade as rapidly as possible after the conversation is ended. When two telephone lines are connected together each of them is "engaged" (in America, "busy") to all other calls which may be made for those two particular lines. Not only does this "engaged" condition apply to the two individual subscribers' lines, but it also applies, in a large proportion of connections in a city telephone system, to a junction line (in America, a local trunk) between two exchanges, as in city telephone systems the large majority of calls pass through two exchanges and require the use of a junction line.

Therefore, it is clear that both for the interests of the users of the service and for the economy of use of the plant, every connection should be unmade immediately after the conversation is ended and the useful purpose of the connection has been served. To effect this prompt disconnection after the end of the conversation, it is essential that both instruments concerned in the connection shall give at the exchange an unmistakable signal that conversation has been concluded.—Cassier's Magazine.

Canadian Electrical Work Praised.

The visit of the British engineers to Canada has already borne fruit in connection with the spreading abroad of the electrical development of Canada. S. E. Fedden, manager of the Sheffield Corporation Electric Supply Department, in his report re the recent visit of electricians to Canada, says he was very much impressed with the excellent lay out of the electricity department at McGill University. Referring to the Soulanges Canal electrical equipment, Mr. Fedden thinks it is one of the best applications of electrical energy he has ever seen.

COMPANY INCORPORATED.

The Temiscamingue and Meshiskamun Dam Co., Ottawa, capital stock \$100,000; purpose to construct a dam across the southern outlet of Lake Temiscamingue and to manufacture and supply machinery for the purpose of generating and distributing electric light and power. The directors are: Sir A. P. Caron, C. B. Powell, R. J. Devlin, R. U. Sinclair and J. A. Ellis, all of Ottawa, and E. B. Eddy and W. H. Rowley, of Hull.

We make Electric Fixtures, Sockets and Cut-Outs

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

PERSONAL AND TRADE NOTES.

Mr. J. H. Allisson, a hardware merchant in Grand View, Man., is a visitor in Toronto this week.

The Canadian Manufacturers' Association held their monthly dinner at London on Thursday night, January 5th.

Mr. Thos. Wilkinson, of Pense, Assa., is about to remove to Regina where he will take the agency for the Cockshutt Plow Co.

Mr. E. H. Cooper, secretary of the Montreal branch of the Canadian Manufacturers' Association, has resigned his position.

Mr. J. Smith, of McCurdy Bros., hardware store, Stratford, was attacked by three unknown ruffians on Tuesday night, January 3rd.

Mr. George Hutchinson, of the firm of Hutchinson, Shurley & Derrett, twine manufacturers, of Toronto, died on January 2nd.

The Grand River Metal Works will in all probability leave Galt owing to the failure of the ratepayers to pass a by-law loaning them the sum of \$5,000.

The Canada Metal Co., of Toronto, have taken out a permit amounting to \$1,000 for a new steel structural frame for their building that was affected by fire, and for cement floors.

Mr. D. McPherson, representing the McClary Manufacturing Co., of London, for the last three years in the Niagara peninsula, will in future represent his firm from Hamilton west in Ontario.

Baines & Peckover, of 124 to 126 Bay street, Toronto, have decided to issue a monthly steel stock list of various kinds of steel manufactured by B. K. Morton & Co., of Sheffield, Eng. The list will appear the first of each month and will no doubt be appreciated by users of steel. In fact, this has been undertaken at the request of the trade.

Mr. D. W. Clarke, the representative of B. K. Morton & Co., manufacturers of Alpha brand steel and speed drills Sheffield, Eng., and Thos. & Wm. Smith, manufacturers of wire rod, Newcastle-on-Tyne, Eng., has just returned from a business trip to Newfoundland and the Maritime Provinces, thus completing a trip covering the whole of Canada and Newfoundland. He makes this trip twice a year. He reports business conditions of Newfoundland good and is, in fact, well satisfied with his trip in general.

BRASS CHAINS



FOR ALL USES

Let us know your needs and we will quote you. We supply brass chains in all sizes, Picture, Chandelier, Brazed Oval Link, Ladder, &c., &c., and can make it to your advantage to buy from us.

CAST AND STAMPED BRASSWARE OF EVERY DESCRIPTION.

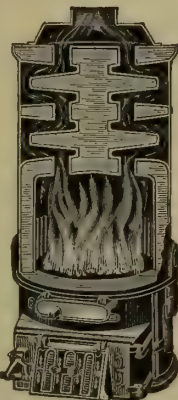
JONES & BARCLAY, BIRMINGHAM, ENGLAND.

STANLEY RULE & LEVEL CO.,

NEW BRITAIN, CONN., U.S.A.

IMPROVED CARPENTERS' TOOLS

SOLD BY ALL HARDWARE DEALERS.



100 IN BERLIN

The old saying about a prophet having no honor in his own country is not true with reference to

THE ECONOMICAL HOT WATER BOILER

for there are 100 of them in the home city, placed there in the last two years.

Agents Wanted. Send for Catalogue.

P. GIES, Founder, BERLIN, ONT.



START THE NEW YEAR

and get our prices on

Electrical Supplies

of every description.

GOOD GOODS

PROMPT SERVICE

SEND FOR CATALOGUE

The Sayer Electric Co'y, Montreal, Que.

10-14 Beaver Hall Hill

Established Over

Fifty Years.

EVERYTHING IN RUBBER GOODS



SIR H. MONTAGU ALLAN,
President.

D. LORNE MCGIBBON,
General Manager.

We are ready to talk to you about

GARDEN HOSE.

OUR LINE IS MORE COMPLETE THAN EVER.

Write us now for your requirements

Our unsurpassed factory facilities enable us to offer some marked improvements in **GARDEN HOSE**, with better values this season than ever before.

Sales Branches and Warehouses:

122 Granville St.,
Halifax, N.S.

Imperial Bank Building,
Montreal, Que.

Front and Yonge Sts.,
Toronto, Ont.

Princess St.,
Winnipeg, Man.

Cordova St.,
Vancouver, B.C.

THE CANADIAN RUBBER CO. OF MONTREAL.

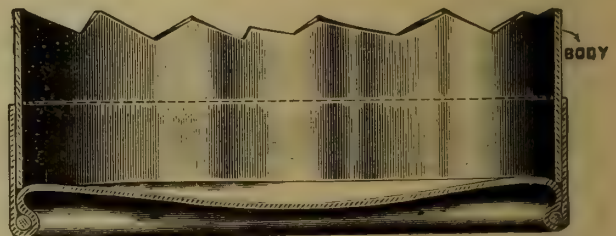
"Samson" Milk Can Trimmings.

Strongest, neatest, most sanitary
and only one-piece bottom made.

Has no seams or rivets to cor-
rode and collect dirt.

Every bottom in each size is of an
exact diameter. Being stamped out with
a die—not spun—there can be no variation as in
a bottom made in several pieces.

Requires less solder and work in putting
together than pieced bottoms—also wears longer.



Section of "Samson" Milk Can Bottom.



The McClary Manufacturing Co.

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

"EVERYTHING FOR THE TINSHOP."

PATENTED, JULY 23, 1900.

HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN.

Montreal.

The MacLean Publishing Co. Limited

Publishers of Trade Newspapers which circulate in the Provinces of British Columbia, North-West Territories, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, P.E. Island and Newfoundland.

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J. Hunter White.
NEW YORK - Room 1241 New York Life Bldg.
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ADELAIDE, AUSTRALIA, - Steamships Building.
W. H. Sharland, Jr.

Subscription, Canada and United States, \$2.00.
Great Britain and elsewhere 12s

Published every Saturday.

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Adscript, Canada.

New Advertisements:

Dana & Co., Cincinnati, Ohio.
Bullard Automatic Wrench Co., Providence, R.I.
Glauber Brass Co., Cleveland, Ohio.
Concrete Building Block and Machine Co.,
Toronto.

TAKING STOCK.

JANUARY is the month usually devoted to stock taking in the retail hardware trade. This is probably the most opportune time for stock taking, although during harvest time, when farmers are too busy to come into town and there is thus a slackness in trade, there is an equally timely period.

If a merchant is to make a success of his business he must be master of it, and to be master of it he must take nothing for granted, but must have records of even the smallest details of his business for ready reference. There are some merchants who do not know from year to year the turn-over in their business. We grant the number is small and made up of merchants whose business is small; but the fact that there is such a condition goes to show that the importance of keeping an accurate ac-

count of all business details is not recognized as it should be.

The looking after stock is a very important phase of a business, and this cannot be done without systematic stock taking.

A detailed inventory of stock should show the amount of each class of goods on hand, their value at the time of purchase and their value at the time of stock taking if there has been an advance or decline on the market. From such an inventory and from the books can be determined the exact standing of the business, a condition which should be known to every business man at least once a year. In many cases the exact standing of the business should be known even oftener than that. Thus a merchant knows just how each department is paying, and can lay plans for the expanding of his business accordingly.

This is not the only good feature of having a complete inventory of a business. Goods which are not selling well are brought to light, and steps can be taken to clear them out. As a rule it is more satisfactory to have a complete turn-over as often as possible than to have stock lying on the shelves indefinitely, even if it be necessary to sell part at reduced prices.

In case of a fire it is of great importance to have an inventory of the stock, since without it the merchant could get little or no redress in the courts, should there be a dispute over insurance. A well-kept inventory will usually be accepted as evidence in a case against fire insurance companies.

A WESTERN PARADOX.

MANY keen observers have been at a loss to understand why, with good crops and high prices collections have been so unsatisfactory in the Northwest. There can be no doubt as to the general prosperity of the west. It is true that in a few small sections the crops were a comparative failure, but, taken as a whole, crop reports show an excellent yield and prices have been so high that the wheat has been marketed freely. But coupled with this state of affairs has been the undeniable fact that merchants have found collections poor. In a country showing every evi-

dence of prosperity, they have found it difficult to collect what is owed them.

In conversation with a representative of this paper, a prominent wholesale man in Winnipeg said that he attributed the slowness of collections directly to the general prosperity of the country. He was confident that if the west as a whole were a little less prosperous he would have less difficulty in collecting his money. Western settlers have seen the price of land in Manitoba rise by leaps and bounds during the last few years; they expect land values in that province to continue to advance and they believe that the Territories will repeat the history of Manitoba. Consequently every western settler is possessed of a consuming land hunger and he is eager to invest all that he can save or borrow in buying more land. No doubt, the investment is a safe one, but it soon ties up all the farmer's available cash, and the merchant often has to wait for his money. The explanation is a novel one and, if correct, it reveals a paradox of prosperity.

The situation is peculiar for, granting that any delay in collections is due to the present prosperity, a return to hard times would make matters much worse. The only remedy is for the retail merchant to insist on getting his money and thus force his customers to recognize the priority of his claim.

TO COLLECT BAD DEBTS.

THE by-laws of the Spokane Jobbers' Association contains among others the following suggestions that might very profitably be followed up by the Canadian trade in connection with the handling of questionable accounts:

Upon receipt of a report the secretary of the association calls upon the party reported and makes a thorough investigation of his affairs, gathering such other information as he can regarding the debtor's financial condition. If it is found that he is being pressed, or bankrupt or insolvent a meeting of the members of the association is called and the facts laid before them. If he is insolvent the secretary of the association

usually obtains the debtor's assignment to him as trustee for the benefit of all creditors and takes charge of the business until the estate is wound up. As a rule a sufficient profit is realized from the goods sold to pay the entire expenses of handling the assignment.

The plan has worked admirably so far, thirty-seven and a half per cent.

A STAFF CONFERENCE.

ONE of the striking features of modern business management is the periodical conference between principals and staff for the discussion of matters pertaining to business growth. In the United States, this practice brings together many notable gatherings of officers, salesmen and agents, many of whom cross a continent to attend the annual assembly, lasting in some cases an entire week. In Canada, too, the custom is obtaining.

It was such an occasion that brought together in Toronto on Saturday, Dec. 31, 1904, the Montreal and Toronto New York and Ontario staffs of The Maclean Publishing Co., whose trade newspapers, The Dry Goods Review, The Canadian Grocer, Hardware and Metal, Bookseller and Stationer, and Printer and Publisher, are known and quoted wherever the English language is spoken.

Among the senior members of the staff present were J. B. Maclean, president; W. L. Edmonds and A. B. Caswell, vice-presidents; A. N. Burns, secretary; P. Forbes, treasurer, and Messrs. F. S. Keith, W. H. Seyler, G. E. Fraser, C. D. Cliffe, W. A. Craick, F. G. Killmaster, Miss Dixon, J. C. Armer, N. Mick, John Cameron, D. O. McKinnon, H. T. Hunter, D. B. Gillies, J. L. Sheather, E. J. Dodd, L. A. Eedy, J. C. Kirkwood, W. C. Russell, H. V. Tyrell, F. M. Alexander, James Anderson, and W. T. Robson, resident manager, New York.

The morning and afternoon were given up to a series of general and special conferences, when many matters relating to the affairs, policy and plans of the company were discussed. Intense interest and animated participation characterized the entire proceedings, and much important business was transacted. One is safe in saying that the coming year

more having been realized than could have been either through the agency of the State or Bankruptcy Courts. The policy seems to be to perfect the system of handling bad accounts with the least possible expense and for the benefit of creditors and as such is well worth the consideration of a certain class of readers of Hardware and Metal.

will see Maclean's Trade Newspapers take on a fresh strength and make their influence even more dominant.

The story of progress in connection with The Maclean Company during the past twenty years, and particularly during the past few years, has few parallels in Canadian enterprise. The growth of the company during the last two years can be understood by the mention of a few facts, the significance of which will be readily perceived.

The editorial staff has been increased from five to fourteen.

The advertising staff from three to eleven. The circulation department has increased from one to six.

Hardware and Metal, Machinery and The Dry Goods Review are directed from Montreal, while The Grocer, Bookseller and Stationer and the Printer and Publisher are directed from Toronto.

The Montreal, Toronto, Winnipeg, London and New York offices each maintain a manager with an editorial, subscription and advertising staffs.

The editorial, subscription and advertising staff in England has been increased to five, with J. Meredith McKim as manager.

The editorial and advertising staff in England has been increased to five, with J. Meredith McKim as manager.

Special permanent correspondents have their headquarters at St. John, Halifax and Vancouver, in Canada; at Birmingham and Manchester, in England; at Paris, France, at Adelaide, Australia, and at Amsterdam, Holland.

Subscription solicitors canvass thoroughly all Canada.

Two advertising solicitors are kept constantly employed in Ontario, covering the territory from Ottawa to Windsor.

Quebec and the Maritime Provinces are visited regularly several times during the year by some members of the Montreal staff.

During the last half of 1904, four distinct canvasses of Illinois, Ohio, New York and Massachusetts were made by

representatives from Toronto and Montreal.

Early this month a member of the staff will visit the West Indies in the interests of the editorial and circulation departments.

In addition to the foregoing evidences of expansion, there is to record the launching of a new monthly publication, designated "Machinery and Manufacturing News," the first number of which will appear this month. It will cover more fully a field which has hitherto been a department in Hardware and Metal.

The magnitude of the company's output in the matter of trade newspapers will be perceived when it is stated that there are set up and printed every day of the year an average of 45 pages, size 9 x 12, thus exceeding the output of the largest daily newspaper in Canada.

The Maclean Publishing Co. has the most complete publishing plant of any newspaper concern in the Dominion, the composition, printing, binding and mailing of all its publications being done on its own premises.

Omitting reports of murders, suicides and other crimes, scandals, local happenings and similar occurrences, The Maclean papers contained more original and exclusive news than any daily in Canada.

Other interesting items of progress and prestige are:

There are 12 university graduates in the service of the company, representing McGill, Queen's, Toronto, and Glasgow Colleges.

Maclean's Trade Newspapers have the largest foreign circulation of any Canadian newspaper of any sort.

The Maclean Publishing Co. use more illustrations in their newspapers than does any daily or weekly publishing concern in Canada.

The Maclean Publishing Co. employs advertising specialists to assist advertisers in the preparation of "copy," whose services to advertisers are entirely free. Of no other newspaper firm in Canada is this true.

The Maclean Publishing Co. are easily the largest consumers of high grade newspaper stock in the Dominion.

In the matter of original cover designs for their several publications, The Maclean Publishing Co. stand alone.

The Maclean Newspapers have never published a line of paid reading matter in their editorial columns; many advertisers and some trade associations have attempted to dictate an editorial policy but none have tried it a second time.

All this record is surely one to be proud of. The present status of the firm has not been achieved without ups and downs. There have been several critical periods in the history of the

company, but the unswerving devotion to a single ideal is having its reward and recognition.

Staff Dinner.

The day's business and the dying year were brought to an agreeable close by a dinner to the staff, served at the Queen's Hotel. There were present all told over sixty. Lieut.-Col. J. B. Maclean, the president, was chairman, and was assisted by W. L. Edmonds, vice-president and general manager; A. B. Caswell, and D. O. McKinnon. The usual toasts were given and provided occasion for the saying of many things calculated to stir the enthusiasm and stimulate the loyalty of every one present. It was the first of what will be an annual event, and the president announced that a year hence, he hoped to have meet at Montreal the staffs from England, Winnipeg and Vancouver, in addition to those from Montreal, Toronto and New York. an utterance that met with hearty applause. The approach of the hour of midnight, when the Sabbath day would be ushered in, brought to a conclusion a profitable conference and a delightful evening.

A NEW CONCRETE BLOCK MACHINE.

CONCRETE blocks have been fully recognized by the leading engineers of the day as building material of high merit. It is practically a new material on the market and the possibilities for its manufacture are unlimited. Up to the present the chief difficulty has been the high cost of the majority of the machines used in making the blocks. However, a new machine has just been placed on the market, which in point of cost makes the manufacture somewhat more reasonable.

The success of the machine is based upon its simplicity. With each machine are three face and end designs, four sizes of end gates, two extra cores for making veneer blocks, one plate for making return corners on veneers, one adjustable cut off for making half and quarter blocks, one facing plate, one tamper, one adjustable hopper, and pallets which are regulated in number according to the amount mentioned in the order. The Pallets are manufactured of wood instead of iron and save a large item in the purchasing price of the machine. The agent for this machine is Robert Taggart, Toronto, whose advertisement may be seen in another part of this publication. A prettily illustrated circular has been issued and may be had upon request to the agent.

GOSSIP OF THE TRADE.

Heard by "The Man on the Inside."

MANY hardware merchants, both wholesale and retail, will welcome the news that the end of the shovel monopoly is in sight. I have just learned that a strong company has been formed in Peterboro' to manufacture shovels and tools for various purposes. The financial strength of the company—which is to be known as the Peterboro Shovel & Tool Co.—is assured by the interest taken in it by Hon. Geo. A. Cox and Hon. J. R. Stratton, the latter of whom is the president of the concern. Several other of the most enterprising business men of Peterboro' are on the board. It is only about four months since the company secured its charter, but already the necessary capital has been subscribed, the plant and equipment purchased and the foundation for the factory started. The plant is to be, I understand, a model of modern manufacturing methods. It will have a capacity in excess of 75 dozen shovels a day, and the company have the assurance of the demand for the bulk of their product right from the start. The total consumption of shovels in Canada is estimated to be from 125,000 to 150,000 dozen per annum. When this company is in operation the shovel business of Canada will be on a much better basis than it has been for some time. The Canadian manufacturers in the field have frequently not been able in many cases to fill the demand, yet their treatment of the wholesale houses has been cavalier, to say the least. Consequently there will be a general feeling of satisfaction on the part of the trade in knowing that a new company is under way, quite capable of meeting the competition of a monopoly.

Speaking of monopolies makes me wonder what the International Harvester Co., who control the binder twine situation, are aiming at in their handling of the twine situation. It is well known that this concern had a big surplus at the end of last season. It is further more recognized that their prices are at the moment below the cost of production, at the present basis of prices for raw materials. The inference is naturally that those in control of the binder twine situation are slaughtering prices with the expectation that some of the weaker companies will be either forced or frightened off the market. One result of this situation has been a movement to induce the Canadian Govern-

ment to put a duty on twine. This movement, I understand, has not been fully organized, yet the pressure brought to bear to secure the duty has been of no mean weight. In any case, there is a general impression that the price will be higher before the season of 1905 is well under way.

...

The works of the Peterboro Lock Co. are generally recognized as both large and suitable for the manufacture of the products of this company; yet, though the firm is not more than half a mile from the railway tracks, they have been unable to get a siding to their factory which they have been occupying for so long. They have decided, therefore, to erect new works, modern in every particular, larger in many ways than the present factory and in a better position for freights, being on the line of both railways. The new plant will occupy about three acres and will give much more room for their manufacturing, their present premises being somewhat crowded by their 125 employees. By the way, this company has recently added to its directorate W. G. Morrow and Wm. Irwin, two of the brightest business men of Peterboro.' These men, with Hon. J. R. Stratton, A. L. Davis and T. Fortye, make a strong directorate.

...

Shurley & Dietrich, Galt, do not make much boast of the development of their works a 130 x 60 foot addition, pending. This firm recently added to their works an 130 x 60 foot addition, which will be devoted to wood-working, among the lines manufactured there being saw handles, etc. This addition will enable them to extend their output materially and will put them in a position to increase their export trade, which is becoming quite a factor in their business.

...

A new wholesale and retail hardware firm, Brooks-Smith Hardware, Limited, has started business at No. 111 and 113 Bay street, Toronto. The new company has a share capital of \$75,000 and has for its directors E. J. Creeper, J. Brooks, and H. Symons, all of Toronto. I understand the firm has received the agency for the Russell & Erwin Mfg. Co., of New Britain, Conn.

"THE MAN ON THE INSIDE."

MARKETS AND MARKET NOTES

(For detailed prices see Current Market Quotations, page 54.)

QUEBEC MARKETS.

Office of **HARDWARE AND METAL.**

232 McGill Street,

Montreal, Jan. 6, 1905.

Hardware.

GENERALLY speaking the hardware trade has been first rate, notwithstanding the holidays. What travelers have been out have found ready buyers and orders have been steadily coming in. Next week, however, will see the four corners of the province covered with the busy drummer, who looks forward to increased business for 1905. Epiphany holidays will last from Friday to Monday, and it is a period usually rigidly kept by the French-Canadians. Holiday trade has been brisk in all the big stores and an increased business has been done, when compared with last year of the same period.

Hockey Sticks and Pucks—Plenty of demand for these articles, as the season is now on. Quotations are as follows: Boys' hockey sticks, from \$1.50 a dozen up; men's, \$2.25 to \$3.50 a dozen; regulation pucks, \$2 a dozen; juvenile, \$1.15 a dozen.

Plated Ware and Cutlery—The rush is now over and business is somewhat quiet. Quotations are unchanged, as follows: Rogers 1847 goods 45 per cent. off list; case carvers from \$2 to \$10 per set; scissors in cases 90c to \$2.

Skates—The cold weather has kept up the demand for skates, and a good business has been maintained. Jobbers were well cleared out owing to demand and stocks are short. We make the following quotations: Halifax pattern, plain, 38 cents a pair; nickeled, 60c a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concaved, \$1.60 a pair.

Axes—Axes are selling freely at unchanged prices. Our quotations are as follows: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—Trade is about the same with prices unchanged. We quote: Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3, \$1.50 a dozen.

Carpet Sweepers—Sale has practically ceased for carpet sweepers. Quotations are as follows: \$21 to \$31 a dozen.

Food Choppers—Steadily increasing demand has kept up for these goods. Our quotations are as follows: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Sewing Machines—There has been a fair demand for sewing machines, and the market is quite active. Prices remain as follows: Hand sewing machines, \$11 each net; complete machines with stand, \$18 and up, according to quality.

Lanterns—A good business is being done in lanterns. Quotations are: Cold blast, \$6; No. 0 Safety, \$4 a dozen.

Sleigh Bells—The season is now on for sleigh bells and excellent business has been done. The demand has kept up right along. Our quotations are: Brass team bells, rough, \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5 a dozen; nickeled, \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—The season also has affected these goods and large orders have been common for different varieties, most especially shovels for snow removal purposes. We quote as follows: Habitant, wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount; Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Barb Wire—Very little doing in this line. We quote: \$2.75 per 100 lbs. f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Fence Staples—Prices remain unchanged and there is little demand. Our quotations are as follows: \$2.65 per hundred lb keg for bright, and \$2.85 for galvanized; 25 to 50 lb packages 25c extra.

Rivets and Burrs—A strong market prevails, but the demand has not been great. We quote the following discounts: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—A fairly good trade has been carried on during the week. Discounts are: Round head, bright, 82 1-2 per

cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—The market is very quiet and orders have fallen off considerably during the week.

Wire Nails—Trade is quite dead. We quote: \$2.20 a keg, f.o.b. Montreal.

Cut Nails—There is nothing doing. We quote \$2.20 per keg, f.o.b. Montreal.

Horseshoes—Considerable demand has developed and although not as good as expected the activity has been fair. We quote: "P. B." new pattern, base price \$3.50 per 100 lbs.; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—The demand is increasing and business is fair.

Sporting Goods—Considerable business is being done, as the season is now on for all kinds of sport. Quotations are: Centre fire cartridgees, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2 per thousand; C. B. caps, \$2.60 per thousand. Standard shot, \$6.50 per hundred lbs; chilled, \$7 per 100 lbs; buck and seal, \$7.50 per 100 lbs; ball, \$8 per 100 lbs. We quote discounts 15 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—Quite an amount of business is being done now for Spring delivery, although spot trade is very light.

Cordage—Some optimistic reports are now going the rounds regarding the future of cordage, prospects appear to be very encouraging.

Cement and Firebrick—It will be two or three weeks yet before much stock will be moving, but there are great possibilities for activity in this trade. We quote: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—Business is very quiet. Our quotations are as follows: 5-16 in., \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3; one inch, \$2.95.

METALS.

Business keeps strong and all kinds of metals are being freely purchased

despite the advancing market. Pig lead has advanced \$3.50 to \$3.60 and tin has fluctuated up and down and closed at about the normal rates. Copper is very firmly held with a strong tone to the market. The demand for all metals is very good. The makers of galvanized iron report an advance. Spot prices are unchanged. Black iron sheets are reported very much stronger, and while local prices have not changed, present stocks could not be replaced at the same prices at which they were purchased. The logical conclusion then, is, that an advance is imminent.

Pig Iron—Future orders are coming quite extensively and prices are unchanged. We quote:

"Disc," No. 1.....	\$16.50 delivered Montreal.
"Dom.," No. 1.....	17.50
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50
" No. 3.....	16.50
" No. 4.....	16.00
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Glenarnock.....	20.00
Gartsherrie.....	19.25
Carnbroe.....	18.50
Carron No. 1.....	19.50 delivered Montreal.
(special).....	18.50
Ayresome No. 1.....	18.00
" No. 3.....	17.50
Summerlee.....	19.50
Clarence No. 1.....	18.00
" No. 3.....	17.50
No. 1 Cleveland.....	18.00

Bar Iron—Considerable demand with an active market. We quote: Merchants' bar, \$1.77 1-2; horseshoe iron, \$2.02 1-2; forged iron, \$1.97 1-2, net cash thirty days.

Tool Steel—Business is good and the demand fair. Our quotations are: Black Diamond, 8c to 9c; Sander-son's, 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb; Conqueror, 7 1-2c; Conqueror High Speed steel, 60c.

Merchant Steel—Some improvement has taken place in the market, which is very firm. We quote as follows: Sleighshoe, \$1.82 1-2; tire, \$1.92 1-2; spring, \$2.75; toecalk, \$2.42 1-2; machinery (iron finish), \$2.02 1-2; square harrow, \$1.92 1-2; reeled machinery steel, \$2.75; mild, \$1.82 1-2; rivet, \$1.82 1-2; net cash thirty days.

Cold Rolled Shafting—Big manufacturers have been using considerable quantities and business is considered active. We quote: Cold rolled shafting, 3-4 in. to 17-16, \$3.85 per 100 lbs; inch and a half to 3 inch, \$3.50 per 100 lbs.

Canada Plates—A very stiff market has set in and firmness is unusual. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—The demand has increased during the week, and it is learned that an advance is likely. Our quotations are as follows: 28 gauge,

\$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—From the large manufacturers it is learned that prices have advanced, notwithstanding the fact that no changes have been reported locally. However, as most orders are for future delivery, it would appear sensible to order at once, or to lay in a stock. We quote: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge, \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Antimony—No change has taken place and firmness still remains dominant. We quote: 9 1-4c to 9 1-2c.

Sheet Zinc—The weakness of the market has been maintained, and if anything the demand has been increased. We quote: Case lots \$6.75 to \$7; small quantities, \$7 upwards.

Tin Plates—No change has been recorded. The market is steady. We quote: Cokes, \$3.75 and charcoal, \$4.

Ingot Tin—Prices remain about the same, although they have changed two or three times during the week. Standard price is 32c to 32 1-2c.

Ingot Copper—It is still rumored that the copper market is in the hands of speculators, and it is difficult to be sure of the market. We quote: 15 3-4c to 16c, the former price being for quantities only.

Ingot Zinc—Scarcely any movement has been recorded and the market is weak. We quote: 6 1-2c to 6 3-4c.

Pig Lead—The market is very strong, it having advanced as high as \$3.60. Considerable activity has been noticed. We quote: \$3.50 to \$3.60, no concessions being obtainable on the former price.

Boiler Tubes—A steady demand continues. We quote: Highest grade soft steel British and American tubes, one and a half inch, 7 1-2c; 2 in., 8 1-2c; 2 1-2 in., 10c; 3 in., 12 1-4c; 3 1-2 in., 16c; 4 in., 20c; 5 in., 45c. Price per foot net.

Scrap Metal and Old Material—Nothing new has turned up in this trade, although considerable business is being done. Our quotations are as follows: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 2 1-4c; zinc, 2 3-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 5 1-2 to 6c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL.

10 Front street east.

Toronto, Jan. 6, 1905.

Hardware.

AS is to be expected there is a quiet market this week. Some houses have had their travelers out on the road for the last three or four days, while others will not have theirs started out until Monday of next week. A few orders are being received from travelers who are on the road. At the present time retailers are busy stock taking, and therefore are not in the buying mood.

The only feature of much interest on the market this week is the issuing of a new trade list of iron rivets and burrs. The discounts on both the rivets and burrs are 60 and 10 per cent.

Orders for ice cream freezers are coming forward well.

Lawn Mowers—A few orders are being placed.

Guns and Ammunition—Trade is of course quiet.

Washing Machines—The market conditions remain unaltered. The usual trade is being done.

Chain—The normal trade keeps up. We quote as follows: 1-4 in., \$6.50; 5-16 in., \$4.45; 3-8 in., \$3.85; 7-16 in., \$3.70; 1-2 in., \$3.55; 9-16 in., \$3.45; 5-8 in., \$3.35; 3-4 in., \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Barb Wire—Prices remain firm at recent changes.

Galvanized Wire—The advance noted last week holds firm. The advanced quotation is \$2.37 1-2 f.o.b. Cleveland. The normal trade continues.

Coiled Spring Wire—The prices on coiled spring wire have been confirmed, but are subject to change without notice. The usual trade continues.

Wire Nails—The situation is unchanged. There is quite a good demand. A fair quotation is about \$2.25 f.o.b. Cleveland.

Cut Nails—Prices remain firm at recent advance. Quotations are \$2.30 to \$2.40 per keg f.o.b. Toronto.

Horseshoes—A very good demand for horseshoes is reported for this time of the year. We quote as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—There is a good demand with unaltered prices.

Screws—A good business is being done, with prices firm.

Rivets and Burrs—There has been a new trade list issued for iron rivets and

burrs. Trade discounts are 60 and 10 per cent. for both rivets and burrs.

Bolts and Nuts—Prices remain firm, and trade is very good.

Woodenware—Market conditions remain unchanged, and the normal business continues.

Cordage—Orders are being booked well. Prices remain unchanged. We quote: Binder twine, Blue Ribbon, 12 1-2c; Red Cap, 11 1-2c; Tiger, 10 1-2c; and Standard, 9 1-2c; manila, 14 1-2c; British manila, 11c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; sasheord "Hercules," 30 to 32c; "Star," 36 to 38c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

METALS.

The local metal market continues very firm. Quotations on both Midland and Hamilton iron have been advanced sharply. Midland cannot be had except for delivery late in the year. The local tin market this week is steady. There has been very little buying done on the local market, as is usual at this time of the year, but of course this is merely temporary.

Pig Iron—Quotations on Midland and Hamilton iron have both been advanced, and Midland is no longer quoted except at the furnace. There is little or no buying being done at the present time, but as soon as the industrial business of the year gets well under way buyers will probably place orders quite freely. Revised quotations are as follows:

Middlesboro, f.o.b. Toronto	\$18 90
Hamilton, No. 1, at furnace	18 00
No. 2, " "	17 50
Midland, No. 1, " "	18 00
No. 2, " "	17 50
Radnor, at furnace	27 50
Londonderry, at furnace	16 50 to 17 00

Bar Iron—Prices remain unchanged, with a temporary slackness on the market. We quote as follows: \$1.80 f.o.b. Toronto, with discount of 2 per cent.; for extras as cut to length while rolling, 2 feet and over, 10c per 100 lbs; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tin—There is a very steady and quiet market. The advance looked for last week has not materialized. Quotations are from 32 to 34c per pound.

Galvanized Sheets—The market is firm and there is a good demand.

Tin Plates—The recent advances hold firm, and there is a very good demand.

Canada Plates—All-bright plates are still very scarce. The recent advance holds firm. We quote: Half-polished \$2.50; and all-bright, \$4.

Brass—The market is active and recent advances hold firm. Discounts are 10 per cent.

Lead—There is a firm market, and a good demand. Quotations are: Pig lead, \$3.60 per 100 lbs; and bar lead \$3.60 per 100 lbs.

Zinc Spelter—The recent advance holds firm. Trade is good. Quotations

are 6 1-4 to 6 1-2c per pound for foreign; and 5 1-2 to 5 3-4c per pound for domestic.

Copper—Quotations remain unaltered. The demand is fair. Quotations are as follows: Ingot copper, 15 1-2c per lb; sheet copper, 20c per lb.

Building Paper—Trade continues quiet. Prices are unchanged and will likely continue so for some time.

Firebrick—Holiday season is now over and with it has ended the demand for firebrick for repairing purposes. Prices continue unchanged. We quote: English and Scotch firebrick 30 to 35c; American, low grade, 25 to 30c; high grade 32 1-2 to 40c.

Cement—Anticipations are for an advance in price, although no material change has taken place as yet. Orders have almost entirely ceased. One peculiarity on the market this year is the absence of orders calling for future shipments, as the merchants at large are looking forward to another decline. Our quotations are as follows: For carload orders f. o. b. Toronto, Canadian Portland, \$1.70; American Portland, \$1.70. For small orders ex warehouse: Canadian Portland, \$1.90 to \$2; American Portland, \$1.90 to \$2.

Old Material—A general brightening up of the market is noted this week. A large number of orders are arriving from the rolling mills for wrought iron, and prices have advanced \$2 on No. 1 and \$1 on No. 2. Zinc is firm. Heavy copper and wire and light copper have both advanced 1-2c per pound, owing to the firm conditions of ingot copper. Brass is firm and an advance is anticipated. An increase in the demand from the foundries has caused machinery cast scrap to become firmer, while malleable and steel has advanced \$1. Trade in old rubbers is quiet. We quote the following: Heavy copper and wire, 12 1-2c per lb; light copper 11 1-2c per lb; heavy red brass, 10c per lb; heavy yellow brass, 9c per lb; light brass, 6s per lb; tea lead, \$2.35 per 100 lbs; heavy lead, \$2.50 to \$2.60 per 100 lbs; scrap zinc, 3 3-4c to 4c per lb; iron, No. 1 wrought, \$11; No. 2 wrought, \$3; machinery cast scrap, \$13; stoveplate, \$8 to \$9; malleable and steel, \$5; old rubbers, 5 1-2c per lb; country mixed rags, 65c per 100 lbs.

Coal—On account of the strong demand for nut coal, dealers have dropped the price of pea coal from \$3.75 to \$3.50 per gross ton, with the intention of trying to induce the outside merchant to handle larger shipments. Slack continues scarce and has advanced. Although trade at present is quiet, it is expected to brighten up at the first of the month when the outside merchants increase their stock to meet the strong demand for Spring consumption. We quote as follows: Anthracite in cars at Briges: Grate, \$5.50 per gross ton; egg, stove and nut, \$5.75 per gross ton; pea, \$3.50 per gross ton.

Standard Hocking, soft coal, in cars, f.o.b. at mines: Lump, \$1.60; 3-4 inch, \$1.50; run of mine, \$1.40; nut, \$1; N.

P. and S., 75c; coarse slack, 50c; box cars 10 cents per ton additional.

Youghiogheny soft coal in cars, bonded, at the bridges: 1 1-4 inch, \$2.60; 3-4 inch, \$2.50; mine run, \$2.40; slack, at \$1.90 to \$2.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B.C., Dec 30, 1904.

THE commercial travelers of British Columbia, many of whom are of course well known to the hardware and allied trades, had their annual gathering at the Hotel Vancouver on the evening of Wednesday, 28th inst. It took the form of a grand ball, and was described as one of the swellest functions of the season. A very large and brilliant assemblage graced the occasion, and the magnificent dining hall of the Hotel Vancouver, the largest room in any building in Western Canada, presented a most brilliant spectacle. As the proceeds of the function were to be devoted to the furnishing and equipping of a Commercial Travelers' Ward in the new General Hospital now being built in this city, it was very gratifying to the managing committee to be able to report a very substantial balance to the credit of the fund.

Two little railway connections, built by the Great Northern in this province this year, have been practically completed before the end of 1904. One of them, the extension of the line in the Crow's Nest Pass district to Fernie, was completed a fortnight ago, and the first train from the south reached Fernie on the new line. The other is the extension of the Great Northern branch from Grand Forks to Phoenix, in the Boundary district. On that the last shot was fired for the grading of the line, this week, and the rails will be laid early in the coming month.

The announced removal of ordnance and other equipment from the British naval and military centre at Esquimalt, following on the reduction of the station from its former importance as the base of the North Pacific squadron, is tantamount to abandonment and dismantling of the fort, on which the British authorities have spent vast sums of money for the past twenty years or more. All stores, electrical appliances, ordnance kept for emergency, and every sort of movable equipment is to be packed up and shipped to Hong Kong. The reduction of the station means a very great deal to business in Victoria as in one way or another the large establishment, naval and military, kept up hitherto at Esquimalt and Work Point barracks, has meant the addition of at least a million dollars a year to the total trade of the city, no mean sum to be deducted.

Delegates from the two lumbermen's associations of the province, the Mountain Lumbermen and the B. C. Lum-

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required: Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

Drummond McCall & Co.
MONTREAL, QUE.

or to

Canada Iron Furnace Co.
MIDLAND, ONT. Limited

Get our prices for

GALVANIZED FLAT SHEETS

THE "VANDA" BRAND

For all purposes requiring the best quality.

It is "deadflat," well galvanized, true to gauge, and specially soft for working-up. We guarantee every sheet bearing our brand.

C.F. JACKSON & CO., Limited

Wholesale Merchants

Ormidale Block, Vancouver, B.C., and
Liverpool, England

Direct Importers of:

Metals of every description, Wire Rope, Portland Cements, Firebricks, Ore Sacks, Grain Bags, etc., etc.

bermen's Association, are leaving for Ottawa shortly to be in attendance when Parliament assembles, for the purpose of urging upon the Government the imposition of a duty on lumber coming into Canada from the United States at least as great as that imposed by the United States on Canadian lumber entering the republic. Mr. W. C. Wells, formerly Minister of Lands and Works in the Provincial Government, and a prominent lumber operator in the interior, is to be one of the delegates. He expressed the opinion that the Ottawa authorities could hardly do anything else than concede the point, in view of the support given the Government by British Columbia in the recent elections.

The re-organization of the coast lumbermen in the matter of prices of lumber has been completed, but so far no great difference is noted, for the reason that at this season the demand is the least and as many of the mills are closed down for their annual overhauling not much activity is displayed in lumber trade.

* * *

The Associated Boards of Trade of Eastern British Columbia will meet in Nelson this year, in annual convention. The cities and towns represented are Cascade, Fort Steele, Fernie, Cranbrook, Grand Forks, Greenwood, Kaslo, Moyie, Nelson, Phoenix, Rossland and Trail. The date of the convention is not yet fixed but will be some time in January or February. The outlined programme to be discussed includes the following important questions affecting business interests of the interior of the province: Organization of a Department of Mines as a branch of the Dominion Government service, the imposition of a duty on rough lumber coming into Canada, the encouragement of zinc production, a scheme for forest preservation, especially from fires; cancellation of reserves on land, changes in system of provincial surveys of land, to prevent issue of duplicate titles to the same portions of land, an occurrence quite possible under present conditions; and finally assistance to a coast to Kootenay railway, and to the Kootenay Central Railway, running north and south in the East Kootenay valley from the Crow's Nest line to the main line of the C.P.R.

* * *

The city of Vancouver has during the year 1904 made very substantial progress, as indicated by the extensions of the waterworks services alone. While very little was done in the way of extending the mains, the progress of the city can be gathered from the fact that the number of services being supplied has risen in the year from 6,275 to 7,400, an increase of 1,125 services in the year. This is the greatest record in the history of the city, and is a fair index of the steady growth which continues as in past years. Owing to increased demands it is proposed to increase the system of water mains next year very

Sheet Zinc Sheet Copper

and other Metals.

From Stock or for Import.

A. C. LESLIE & CO.

509-512 Merchants Bank Building.

MONTREAL.

Anti-Freezing Pumps

will soon be in demand.

You ought to lay in a stock of our

Standard
Anti-Freezing Pumps

before the cold weather sets in.

They are the best line you can handle because your customers will be perfectly satisfied when they find their pumps will work on a zero morning.



Write for catalog and prices

THE R. McDOUGALL CO., LIMITED
Calg., Ont.

BAINES & PECKOVER
TORONTO.

Ontario agents for

B. K. MORTON & CO'S.

"ALPHA"

HIGH SPEED STEEL

AND

Crucible Cast Steel

Large stock on hand. Send for Stock
List

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

considerably, and for that purpose a loan of \$100,000 is proposed in addition to the means available from the water revenue.

PITTSBURGH METAL MARKETS.

From the Iron Trade Review, Jan. 5, 1905

Pig Iron—The two Donora furnaces of the Carnegie Steel Co. will be in operation this week, while only one of the 16 furnaces of the Bessemer pig iron association is idle. Iron is being made in this and the Valley districts at an unprecedented rate and the fact that there are no stock accumulations is ample proof that it is going into rapid consumption. There has been some buying of No. 2 during the week for delivery through the first quarter and the first half. This iron was sold on the basis of \$16.25 to \$16.50 furnace. Bessemer iron for any delivery is held at \$16.25 furnace, but there has been little buying during the week. Southern No. 2 is firm at \$13.50 Birmingham. Northern forge is strong at \$16.35 to \$16.50 Pittsburgh. We make the following quotations:

Bessemer, Valley	\$16 10 to \$16 25
Bessemer, Pittsburgh	16 95 to 17 10
No. 1 Foundry	18 00 to 18 25
No. 2 Foundry	17 35 to 17 85
Gray forge, Pittsburgh	16 35 to 16 50
Basic, Valley	15 75 to 16 00
Basic, Pittsburgh	16 60 to 16 85

Steel—Premiums ranging from \$2 to \$3 a ton are being paid on billets and bars for delivery through the first quarter, while for delivery the first half premiums range from \$1 to \$1.50. There has been little buying through the week, however. We make the following quotations of official prices: Bessemer and open-hearth billets, 4x4 in., and slabs up to and including 0.25 carbon, \$21 f. o. b. mill, Pittsburgh, with actual freight to points of delivery; 0.26 and including 0.60 carbon, \$1 advance; 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 4x4 in., \$2 advance; sheet and tin bars, \$23; cut bars, \$23.50; forging billets, \$23. Bessemer and open-hearth steel rods are held at \$30.50 to \$31.

Rails and Track Material—Rail mills have orders on their books for close to 700,000 tons for delivery this year, while additional large orders are pending. Light rails have again been advanced \$1 a ton and the early resumption of a large number of the rerolling mills is looked for.

Plates—All the plate mills in this district report heavy specifications from the steel car plants in this vicinity.

Bars—Specifications on steel bar contracts are unusually heavy and all the local mills are operating in full. Demand for iron bars also continues heavy, although prices have not been changed during the week.

Sheets—Demand for sheets continues heavy and the mills are having no difficulty in securing business at the advanced prices. Both the mills of the independent and the American Sheet and Tin Plate Co. are operating as they never



Women Won't Do It

—and you can't blame them. To put their hands in water saturated with lye would be worse than foolish. With a

TARBOX SELF WRINGING MOP

lye water, boiling hot, can be used. Such a mop is a good thing. It will sell.

ORDER THEM FROM YOUR JOBBER.

TARBOX BROS., = Toronto, Canada

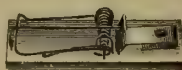


THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs, Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.



Joker



Blizzard

TRAPS FOR RATS AND MICE

Swift as lightning, sure as death and sure death to the animal. Strong, simple, substantial construction. "To get the best trap trade, sell the best traps made."

Write for prices to

J. M. Mast Mfg. Co., Lititz, Penna.

Canadian Ag'ts, C. H. Grenfell & Co., London, Ont.



Snap Shot



Old Nick



Write for Catalogue and Prices.

ICE HARVESTING TOOLS

For Butchers, Dairymen, Farmers, Ice Dealers, etc.

Ice Plows, Saws, Tongs.

Bars, Hooks, Axes, etc.

Robert Donaldson & Sons

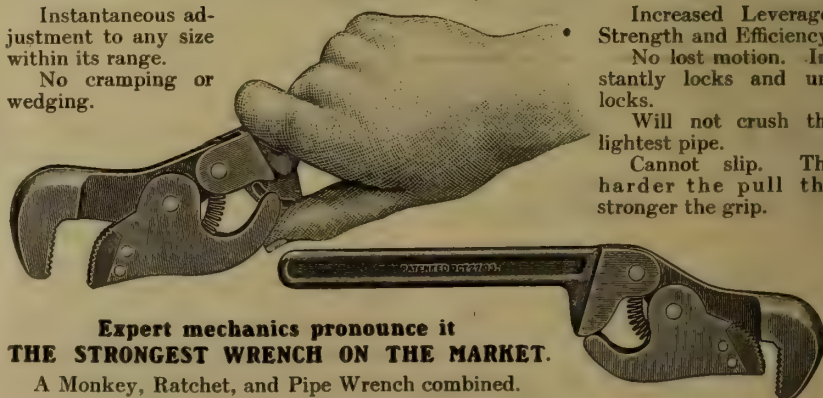
30 YOUNG SQUARE, MONTREAL, QUE.

THE BULLARD AUTOMATIC WRENCH

PATENTED OCT. 27, 1903

Instantaneous adjustment to any size within its range.

No cramping or wedging.



Increased Leverage, Strength and Efficiency. No lost motion. Instantly locks and unlocks.

Will not crush the lightest pipe.

Cannot slip. The harder the pull the stronger the grip.

Expert mechanics pronounce it
THE STRONGEST WRENCH ON THE MARKET.

A Monkey, Ratchet, and Pipe Wrench combined.

Sold by all Jobbers in United States, Canada, and Foreign Countries.

Manufactured only by

BULLARD AUTOMATIC WRENCH CO.
PROVIDENCE, R. I.

WRITE FOR BOOKLET
AND PRICES.

did before and the consumption is at a tremendous rate.

Pipes and Tubes—On January 3, merchant pipe was advanced 1-2 point, amounting to \$1 a ton, while a reduction of two points was made in boiler tubing. The pipe mills have large ton-nages on their books despite the unfavorable season, and if the present rate of consumption continues through the year, last year's record, the best yet made, will be broken.

Wire and Wire Nails—An advance in all kinds of wire products is looked for but as yet has not been announced. Demand for wire products is heavy, and jobbers have closed large contracts for their requirements during the next 60 days. We make the following quotations: Wire nails, jobbers' carload lots, \$1.75; retailers' carloads, \$1.80; and less than carloads, \$1.90; painted barb wire, \$1.90 to jobbers in carloads; retailers' carloads \$1.95 and less than carloads, \$2.05, with 30 cents for galvanizing. Annealed smooth fence wire is held at \$1.60, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburg, 60 days, with 2 per cent. discount for cash in ten days. Iron cut nails are held at \$1.85 Pittsburg, and steel at \$1.75.

Merchant Steel—All of the mills producing high grade steel in this district are operating in full and report a continued heavy demand. The shafting market is also improving but prices remain unchanged.

Old Material—The market is quiet, but prices are firm and dealers are looking for further advances.

LONDON METAL MARKETS.

From Metal Market Report, Jan. 3, 1905.

Pig Iron—Scotch warrants, Glasgow, closed at 54s. and Middlesboro No. 3 foundry closed at 51s 6d, making prices as compared with last week 6d higher for warrants and 1s 11-2d for Middlesboro.

Tin—Spot tin opened weak at £132 2s 6d, futures at £131 5s, and after sales of 210 tons of spot and 240 tons of futures, closed steady at £132 2s 6d for spot and £131 10s for futures, making prices as compared with last week £2 7s 6d lower for spot and £2 2s for futures.

Copper—Spot copper opened steady at £68 12s 6d, futures at £69, and after sales of 850 tons of spot and 700 tons of futures closed steady at £68 12s 6d for spot and £68 18s 9d for futures, making price as compared with last week 17s 6d higher for spot, and 16s 3d higher for futures.

Spelter—The market closed at £25 5s making prices as compared with last week 8s 6d higher.

Lead—The market closed at £12 18s 9d, making prices as compared with last week 3s 9d higher.

TO TOUR THE WEST.

Hardware and Metal has pleasure in reproducing in this week's issue a portrait of Mr. J. S. McGuirl, of the Briggs Ledger System Co., Toronto. Mr. McGuirl, although hardly 21 years of age is successfully established in business, thanks to a liberal inheritance of Canadian enterprise, which has brought "name and fame" to so many sons of Canada in the trade and commerce of the world.

He was born in Kingston, removing when quite a boy to Ottawa, where he entered the employ of the Briggs Ledger System Co., and was soon promoted to the position of traveling salesman. In June, 1903, the business offices of the firm were moved to Toronto and Mr. McGuirl became office manager.

He expects to start on an extended business trip to Manitoba and the Can-



Mr. J. S. McGuirl.

adian Northwest early in the new year, calling upon the trade with a complete line of Briggs' office labor saving devices. He will make Winnipeg his headquarters, and according to his present plans, will cover his territory as far west as Calgary, Alta., in the course of eight or nine months. The Briggs Ledger System is already favorably known among business men in the west. At the same time, however, this firm is in the van with many other Canadian manufacturers in their search for some of the fruits of the growing time in that great country.

COMPANIES INCORPORATED.

Toronto Gas and Gasoline Engine Co., Toronto, share capital \$300,000; purpose to manufacture and deal in gasoline or gas engines and motors, steam engines, electrical motors, machinery and appliances, launches, boats, vessels, cars, trucks and other conveyances, also to carry on the business of founders and machinists. The directors are: J. and



For either new or old buildings

OUR

Metallic Cornices

can't be equalled for practical service and artistic beauty.

They are light in weight, easily handled and economical in cost—giving fire-proof protection as well as a handsome effect.

Almost countless stock designs—or any particular size, shape or pattern to order. Write for full details.

METALLIC ROOFING CO., LIMITED

Wholesale Mfrs.

TORONTO, CANADA.

L. C. Laishley, both of Toronto, and R. Hunter, of Toronto Junction.

The Ross, Taylor Co., Exeter, share capital \$30,000; purpose to carry on the business of lumber merchants, also to do a general planing mill and saw mill business. The directors are: D. A. Ross, J. Taylor and J. R. Hind, all of Exeter.

Universal Spring Motor Co., Toronto, share capital \$250,000; purpose to manufacture electrical motors or any other power-producing device. The directors are: G. H. Campbell, L. F. Ashton and W. B. Bentley, all of Toronto, W. J. Johnson, of Springfield, Ohio, W. G. Morden, of Montreal, and S. Metcalfe, of Galt.

Consumers' Box and Lumber Co., Toronto, share capital \$100,000; purpose to manufacture and deal in wooden boxes, lumber, wood-working machines, tools, and builders' and carpenters' supplies; also to manufacture and deal in shingles. The directors are: J. B. Miller, J. McClelland and F. Sully, all of Toronto.

The Canadian Barcalo Mfg. Co., Wexford, share capital \$40,000; purpose to manufacture and deal in metal beds, bed springs, mattresses, etc. The directors are: E. J. Barcalo, U. L. Candell, A. Becker and H. L. Hatt, all of Buffalo, and W. I. Crombie, of Toronto.

Canada Cycle and Motor Co., New Zealand, Limited, Toronto, share capital \$50,000; purpose to acquire as a going concern any part of the business carried on by the Canada Cycle and Motor Co., to deal in motor vehicles, automobiles, bicycles, etc. The directors are: T. A. Russell, E. B. Ryckman, and C. S. MacInnes, all of Toronto.

The Commercial Oil Company of Hamilton, Hamilton, share capital \$100,000; purpose to manufacture and sell all kinds of oils and lubricants used in running machinery, also to manufacture and mix paints. The directors are: J. C. Person, G. L. Person, C. Goring, W. C. Person, and W. J. Morrison, all of Hamilton.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

MANUFACTURERS' AGENT WANTED.

AN English firm who make a specialty of brass tubing, all kinds; brass and copper sheets, German silver, rolled brass and wine, want an agent for Toronto and district. Address Box 209, HARDWARE AND METAL, Toronto. (tf).

ASSISTANT EDITOR WANTED.

SOME one well acquainted with the hardware and metal business wanted as assistant editor HARDWARE AND METAL and CANADIAN MACHINIST at Montreal. State fully experience and salary wanted. Address Managing Editor HARDWARE AND METAL, Montreal.

AD. WRITERS.

AD. WRITER—Smart, capable, practical, open to engagement. Williams, 189 Jarvis street, Toronto.

WRITE ADS—Send quarter, and few details, for sample ad. Williams the Advertiser, 189 Jarvis street, Toronto.

BUSINESS CHANCES.

THE LOCATORS—W. B. Herbert, general manager. The largest and oldest exclusive business brokers in the West. Address The Locators, 63 Merchants Bank Building, Winnipeg.

HARDWARE—In a small town about 50 miles west of Winnipeg, nice clean stock at 85 cents, splendid opening for young man to get into business for himself. We can make the cash payment to suit you and arrange other details to your satisfaction. Write us about this. The Locators.

HARDWARE AND TIN SHOP—Just listed, stock clean and good about \$2,500; rent \$22; 3 elevators; one competitor. This is a snap to the quick buyer. The Locators.

HARDWARE—Nearly 200 miles from Winnipeg, annual turnover \$16,000; stock about \$4,500; the stock is new and for a going concern, we know of no better. It will pay you to investigate. The Locators.

HARDWARE on the Soo line; stock \$3,000, good, annual turnover \$12,000. Terms half cash balance 3 and 6 months. Enquire The Locators.

FOR the above and other business, address The Locators, 63 Merchants Bank Building, Winnipeg.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

HARDWARE CONDITIONS IN MANITOBA.

(Market quotations corrected by telegraph up till 12 a.m. Friday, Jan. 6, 1905.)

Office of HARDWARE AND METAL.

Room 515 McIntyre Block,

Winnipeg, Man.

IN the course of an interview last week with Hardware and Metal, as to the general condition of the hardware trade in the West, A. Buehler, manager of The J. H. Ashdown Hardware Company, said that the year just closed showed a marked improvement over 1903. "While I have not all the figures at my disposal yet, and, therefore, can not speak with exactitude, I think I am safe in estimating the increase in our business during 1904 as at least 25 per cent. compared with 1903. No doubt other houses not so long established can show a large percentage of increase, but that means a great deal for a business such as ours."

"The increase has been a general one," continues Mr. Buehler in response to a question. "In Winnipeg, the sales of builders' hardware have shown the largest increase and through the country there has been a greatly increased demand for general hardware. The only trouble is that collections have been very slow, and I find it hard to account for that in view of the large crops and good prices. It is a puzzle to me."

Asked as to his opinion of the outlook for 1905, Mr. Buehler said he was no prophet, but he saw no reason why business should not continue to be satisfactory.

Miller, Morse & Co. became on the first day of January Miller, Morse Hardware Company, Limited. The immense new warehouse of this firm is almost ready for occupation. The size of Winnipeg's wholesale warehouses is always a great surprise to Eastern visitors unacquainted with conditions here, and the new Miller, Morse Hardware Company's warehouse is now one of the most conspicuous examples.

The Bonspiel will be held early in February, and it is during that week that the first annual meeting of the Western Retail Hardware and Stove Dealers' Association will be held in this city. Although the association have had no organizer at work, the spontaneous response to the invitation of the executive has been gratifying, and the indications point to a most successful meeting.

In another column will be found reference to the new catalogue now being issued by The J. H. Ashdown Hardware Company. An interesting experiment is being made by this firm with the loose leaf system and if the trade will co-operate to keep the catalogues up to date the system will, no doubt, be followed by other houses. The preparation of a catalogue of this kind entails considerable expense. The manufacturers supply wholesale houses with cuts for their catalogues, but as this catalogue must be revised continually, it has been necessary to have electros made of every page.

Wholesale business is naturally very quiet at present, as trade has not yet emerged from the stagnation of the holiday season. We quote:

Barbed wire, 100 lb.....	\$2 85
Plain galvanized.....6 to 8	3 39
".....9 2 50	2 90
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	2 85
Staples.....	3 35
Oiled annealed wire.....10	2 86
".....11	2 92
".....12	3 00
".....13	3 10
".....14	3 20
".....15	3 35
Annealed wires (uncoiled) 100 lb. less.	
Horseshoes, iron, No. 0 to No 1.....	\$4 55
No. 2 and larger.....	4 30
Snow shoes, No. 0 to No. 1.....	4 80
No. 2 and larger.....	4 55
Steel, No. 0 to No. 1.....	4 70
No. 2 and larger.....	4 45
Horsenails, No. 4—1 1/4 in., list price.....	0 48
" " 5—2 " ".....	0 32
" " 6—2 1/4 " ".....	0 28
" " 7—2 1/2 " ".....	0 24
" " 8—2 3/4 " ".....	0 22
" " 9—2 1/2 " ".....	0 20
" " 10—2 3/4 " ".....	0 20
" " 11—2 1/2 " ".....	0 20
" " 12—2 1/2 " ".....	0 20
" " 14—3 1/4 " ".....	0 20

Discounts on these prices are for "C" brand 40, 10 and 7 1/2 per cent., for other brands 55 and 60 per cent. Add 15c. per box.

Cut Nails—		Wire Nails—	
2d 1 in.....\$4 00		1 in.....	4 00
3d Fin. 1 1/4 in.....4 00		1 1/4 in.....	4 00
3d 1 1/4 in.....3 65		1 1/2 ".....	3 65
4d 1 1/4 in.....3 40		1 3/4 ".....	3 40
5d 1 1/4 in.....3 40		1 3/4 ".....	3 40
6d 2 in.....3 30		2 ".....	3 30
8d 2 1/2 in.....3 15		2 1/2 ".....	3 15
10d 3 in.....3 10		3 ".....	3 10
20d 4 in.....3 05		3 1/2 ".....	3 05
30d 4 1/2 in.....3 00		4 ".....	3 05
40d 5 in.....3 00		4 1/2 ".....	3 00
50d 5 1/2 in.....3 00		5 ".....	3 00
60d 6 in.....3 00		5 1/2 ".....	3 00
		6 ".....	3 00

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 65
Spring steel.....	6 00
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	9 50
Jessop.....	13 00

Black Sheets, 10 to 16 gauge, 100 lb.....	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
28 gauge.....	4 10

Galvanized sheets—	
Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge.....	4 50
28 gauge.....	4 50
30 gauge or 10 1/2 oz.....	4 75

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Genuine Russian, per lb.....	1 1
Imitation ".....	0 7
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05

Finplate, IC charcoal, 20 x 28, box.....	10 00
" IX.....	12 00
" IXX.....	14 00
Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24.....	3 25
Canada plate, 20 x 28.....	3 50
Canada plate, full polished.....	4 00
Sheet zinc, cask lots, 100 lb.....	8 25
Broken lots.....	8 75
Pig lead, 100 lb.....	4 50

Black iron pipe, 1/4 inch	.....	2 45
" 3/4 "	.....	2 65
" 1 "	.....	3 00
" 1 1/4 "	.....	3 80
" 1 1/2 "	.....	5 50
" 2 "	.....	7 45
" 2 1/2 "	.....	8 9
" 3 "	.....	12 30
Rope, sisal, 7-16 and larger, basis	.....	10 75
Manila, 7-16 and larger, basis	.....	15 25
Lathyrum	.....	11 25
Solder	.....	21
Axes, chopping	\$ 6 75 to 12 00	
" double bits	12 00 to 18 00	
Bluestone	.....	5 25
Screws, flat head, iron, bright	.....	85 and 10 p.c.
Round "	.....	80 p.c.
Flat " brass	.....	75 and 10 p.c.
Round "	.....	70 and 10 p.c.
Coach	.....	70 p.c.
Bolts, carriage, 3/4 or smaller	.....	60 and 5 p.c.
" 7-16 and up	.....	55 p.c.
Bolts, machine, 3/4 and under	.....	55 and 5 p.c.
" 7-16 and over	.....	55 p.c.
Bolts, tire	.....	65 p.c.
Bolt ends	.....	55 p.c.
Sleigh shoe bolts	.....	65 and 10 p.c.
Machine screws	.....	70 p.c.
Plough bolts	.....	55 p.c.
Square nuts, case lots	.....	discount.
" small lots	.....	2 1/4 c.
Hex " case lots	.....	30 c.
" smaller lots	.....	2 1/4 c.
Rivets, iron	.....	50 and 10 p.c.
Copper, No. 8	.....	32 1/2
No. 12	.....	37 1/2
Coil chain, 3-16 inch	.....	9.25
" 1/4 inch	.....	7.25
" 5-16 inch	.....	5.20
" 3/4 inch	.....	4.60
" 7-16 inch	.....	4.45
" 1/2 inch	.....	4.30
" 3/4 inch	.....	4.10
" 1/2 inch	.....	4.30
Spades and shovels	.....	40 and 5 p.c.
Harvest tools	.....	60 p.c.
Axe handles, turned, s.g. hickory, doz.	\$3 15	
No. 1	.....	1 90
No. 2	.....	1 60
Octagon extra	.....	2 30
No. 1	.....	1 60
Files :		
" Arcade "	.....	70 and 10 p.c.
" Black Diamond "	.....	60 p.c.
" Nicholson's "	.....	62 1/2 p.c.
Building paper :		
Anchor, plain	.....	65c
" tarred	.....	70c
Pure fibre, plain	.....	67 1/2 c
" tarred	.....	80c
Ammunition, cartridges, Dominion R.F.	.....	50 and 5 p.c.
Dominion, C.F., pistol	.....	30 p.c.
" military	.....	15 p.c.
Ammunition, cartridges, American R.F.	.....	33 1/2 p.c.
C.F. pistol	.....	5 p.c.
C.F. military	.....	10 p.c. advance.
Loaded shells :		
Eley's and Kynoch's soft, 12 gauge		
black	.....	15 00
chilled, 12 gauge	.....	16 00
soft, 10 gauge	.....	18 00
chilled, 10 gauge	.....	19 00
Shot, Ordinary, per 100 lb	.....	6 25
Chilled	.....	6 75
Powder, F.F., keg, Hamilton	.....	4 7
F.F.G., Dupont's	.....	5 00
Tinware, pressed, retinned	.....	70 and 10 p.c.
" plain	.....	75 and 2 1/2 p.c.
" pieced	.....	30 p.c.
Japanned ware	.....	37 1/2 p.c.
Enamelled ware, white	.....	45 p.c.
" Famous	.....	50 p.c.
" Imperial	.....	50 and 10 p.c.
Green Wire Cloth	.....	1 55

PETROLEUM.

Silver Star, per gal.	.....	22 1/2 c.
Sunlight	.....	23 1/2 c.
Eocene	.....	25 1/2 c.
Pennoline	.....	26 c.
Crystal Spray	.....	25 c.
Silver Light	.....	23 c.
(In barrels f.o.b. Winnipeg.)		

SCRAP.

No. 1 cast iron	.....	\$14 to 15
No. 2	.....	7
Wrought iron scrap	.....	5

GILBERTSON'S

COMET

Agent: ALEXANDER GIBB, Montreal.

Your sales of

GALVANIZED SHEETS

should be larger this year.

Handle Comet Brand.

Makers: W. GILBERTSON & CO., Limited
Pontardawe, South Wales.

PUT DOWN ALL YOU KNOW

about Stove and Furnace Cements—all you know of what they should be, and you have described

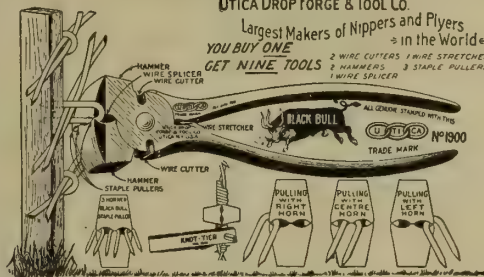
STERNE'S
ASBESTOS CEMENT

G. F. STERNE & SON, Sole Makers, Brantford, Ont.

J. H. HANSON, 422 St. Paul St., MONTREAL, Eastern Agent.

UTICA FENCE TOOL & BUTTON PLYER

Utica Drop Forge & Tool Co.

Largest Makers of Nippers and Plyers
in the World
YOU BUY ONE
GET NINE TOOLSSend for Plyer section of the Green
Book of Hardware Specialties.

UTICA DROP FORGE & TOOL CO.,

Mfrs. Nippers and Plyers

SMITH & HEMENWAY CO.,

Mfrs. Cutlery and Hdwe. Specialties

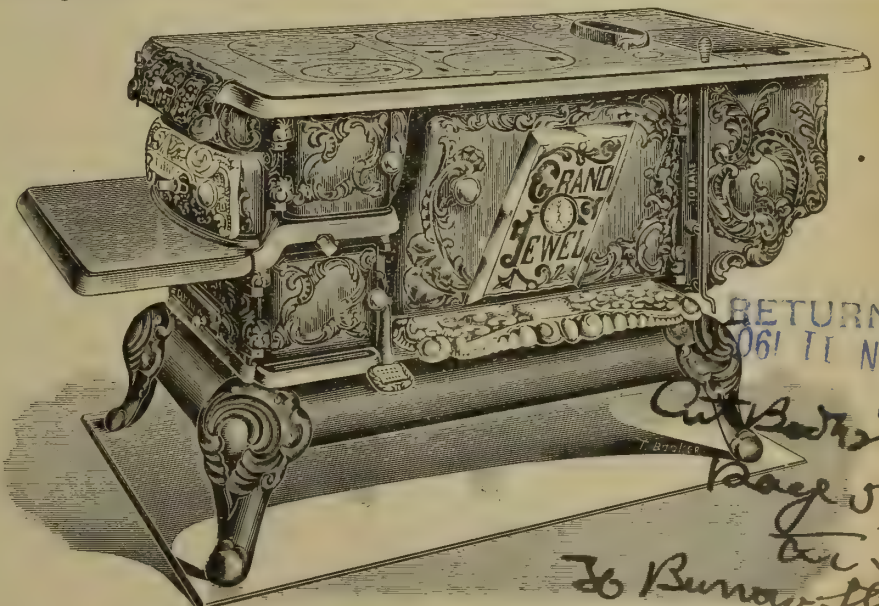
294 Broadway, New York City

Canadian Sample Room: 215 Coristine Bldg.,
Montreal, Can.

ALLEN C. JENKING, Canadian Manager

The Grand Jewel Coal Cook Stove

is a new stove of the very highest class, specially adapted for burning Hard or Soft Coal; can also be used for burning Wood



Two Sizes—Square

Duplex Grate of improved pattern. No space left between grate and fire-box linings, so that no ashes or cinders can pass between or accumulate, so as to interfere with its easy working. One movement of the crank cuts out the dead ashes and cinders and drops them into ash pan.

The Duplex Grate when reversed forms a perfect WOOD fire bottom, and with all the coal linings in position 17 inch wood can be used. Special Wood Linings can be supplied to admit wood 24 inches long.

Two Sizes—with Tank

The Oven is our standard one piece Sheet Steel Oven, same as our Grand Jewel Wood Cook, which has been so wonderfully popular and successful. This Oven will never warp nor crack. With a Steel Oven much less fuel is expended in getting up a baking heat, and less required to keep the stove running.

The Oven is well ventilated.
Oven Door Thermometer.

Water Front for either size supplied when ordered

Manitoba
Depot

MERRICK, ANDERSON & CO.,

Winnipeg

Copper (heavy).....	8½c. per lb.
Yellow brass (heavy).....	7½c. "
Light brass.....	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2½c. "
Zinc scrap.....	1c. "

PAINTS, OILS AND GLASS.

White lead (pure).....	\$5 00 to \$5 50
Putty in bladder, 2½ lb. in 100 lbs. keg. o 2½	0 02½
Turpentine, pure, in barrels.....	\$ 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 55
Boiled.....	0 58
Lubricating oils, heavy castor machine....	0 26½
" " extra engine.....	0 27
" " dynamo.....	0 38
" " back.....	0 22
" " cylinder.....	\$0 50 to 0 80
(as to quality)	
Harness oil.....	0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00½
" " 2nd pressure.....	1 09½

WINDOW GLASS.

16-oz. O.G., single, in 50-ft. boxes—	
16 to 25 united inches.....	\$2 25
26 to 40 ".....	2-50
16-oz. O.G., single, in 100-ft. cases—	
16 to 25 united inches.....	4.00
26 to 40 ".....	4.25
41 to 50 ".....	4.75
51 to 60 ".....	5.25
61 to 70 ".....	5.75
21-oz. C.S., double, in 100-ft. cases—	
26 to 40 united inches.....	6.30
41 to 50 ".....	7.35
51 to 60 ".....	8.40
61 to 70 ".....	9.45
71 to 80 ".....	10.50
81 to 85 ".....	11.55
86 to 90 ".....	12.60
91 to 95 ".....	14.70
96 to 100 ".....	17.35

THEIR EIGHTH ANNUAL BANQUET

THE eighth annual banquet tendered by the president and directors of the Thos. Davidson Mfg. Co., Limited, Montreal, to the travelers and heads of departments on Thursday evening, December 29th, was thoroughly enjoyed by all the participants. The function was held in the club rooms of the employes on Vinet street. The president of the company, Mr. Jas. Davidson, acted as chairman, and proposed the health of "His Majesty the King," which was followed by the National Anthem. Telegrams and letters were read from those who were unavoidably absent.

Mr. Goodwill in proposing the toast to the travelers referred to the good feeling which has always existed between the firm and the travelers in their employ. Messrs. J. N. Young and W. H. Morgan replied on behalf of the "Knights of the Grip." Their remarks descriptive of the life of the commercial man received an attentive hearing.

The toast of Canada found an eloquent exponent in Mr. W. J. White, K.C., and was loyally honored by the singing of the "Maple Leaf." Mr. P. Duchesne ably responded and hoped that all Canadians of whatever origin, would continue to walk hand in hand, and thus assure the future prosperity of the Dominion of which all are so justly proud.

The toast "Office Staff and Ware-rooms," was proposed by Mr. H. B. Chadburn and replied to by Mr. A. Bindley on behalf of the office, and Mr. W. Brennan for the warerooms. Mr. T. C. Davidson proposed "The Heads of Departments." His humorous remarks were well received. Mr. M. Lachapelle replied on behalf of the foremen. The "Wild and Woolly West," coupled with the names of Messrs. J. T. Webb and A. G. Low (the firm's western representatives) was then proposed by Mr. C. P. Clarke, during which the following original poem by Mr. Webb was read, and was accorded a hearty reception:

A TOAST TO THE WEST.

Oh! who has not heard of the "Wild, Woolly West,"
With its snowstorms the fiercest that
gale ever blew,
With its tales of the Redman, its fights
with red rust,
Its wheat-yields the greatest the world
ever knew.
They come from bleak Russia's discon-
solate plains,
And the fields that bear roses 'neath
Italy's sun;
The west welcomes all, but the strangers
soon find,
They must "get up and do, or sit
down and be done."

When Winnipeg property took an ad-
vance
And fortunes were made in a wonder-
ful way,
Our staid eastern brethren talked darkly
of "Boom,"
Saying "Pooh! what a figure for one
foot of clay";
But now they would like a "hand in the
game."
Some few feet on Portage, a hundred
on Main,
So they're sitting expecting a "mighty
collapse"
When they mean to "butt in" for
some "pretty good snaps."

'Tis from this land so much maligned
To you our hearty greetings come,
But pledge the great west in a bumper
of wine,
Its trade nets the firm a pretty good
sum.
And though we have Winter "nine
months of the year,"
And the glass every morning says
"Fifty below,"
We are selling the goods and don't
want to come back,
We would rather have blizzards than
soft melting snow.
From the limpid blue waters of Can-
ada's lakes
To where the salt waves kiss Colum-
bia's shore,
The goods made by Davidson's hold the
first place,
You should hear Webb unfolding his
catalogue lore,

And just follow Low (who is not low at
all),
Through the fair fertile plains to the
"Kootenav branch,"
I'll wager a nickle that Premier Ware
You will find in each residence, shanty
and ranch.

Ho! gentlemen lift your glasses up
And pledge the great west in the
"blood of the grape";
And the next time "a knocker" has
something to say
Just send him to Low to "get put
out of shape."
Ah! famed is the east for its apples and
maids,
Its streams ever rippling, its dear
sunny glades,
But put the great west "right onto my
plate"
And drink to her sons in the "blood
of the grape."

Mr. R. B. Gray then proposed the health of the president and directors of the firm, replied to by Mr. James Davidson. The toast to the ladies was proposed by Mr. Alf. Baker, and responded to by Mr. F. H. Wood. Mr. Jas. Davidson then proposed the toast to Mr. Williams (the superintendent of the factory) who so thoroughly attended to all the details of this banquet, and who was unavoidably absent through illness. The toast "The Chairman," was proposed by Mr. W. J. White, K.C., and replied to by Mr. Jas. Davidson. Mr. Davidson then announced the last toast of the evening "Our Absent Friends," which was heartily honored.

Those who assisted with songs or re-
citations were Dr. Haldimand, Messrs.
C. P. Clarke, F. Toupin, J. W. Strachan,
C. J. Cartledge, Jos. O'Connor, Jos.
Dore and W. E. Barrat. The services
of Ratto Bros.' orchestra were much
appreciated. The singing of "Auld
Lang Syne" and the National Anthem
brought a very successful evening to a
close. The invitation and menu cards
were as usual lithographed on tin.

A BIG FIRE IN BROCKVILLE.

On January 4th the five-storey brick building of the Canada Carriage Co. was burned to the ground. The fire started just before the whistle blew for the completion of the day's work. It originated in that part of the basement used for the storage of paints and oils. The inflammable liquids were an easy prey to the flames, and shortly after an explosion rent the air which tore the floor above the storage department into shreds causing the flames to shoot up and get a good foothold on the other parts of the plant. The fire brigade quickly responded but the fire had gained such headway that nothing could be done, except saving the neighboring buildings. The company were prepar-
ing for the coming season and the plant was heavily stocked with raw material. The loss is estimated at \$300,000. To meet this loss there is insurance for \$200,000.

PAPERING THE FLAT.

WHEN the Hamlins found that it was going to cost \$40 to paper their five-room flat Mrs. Hamlin declared she would do the work herself and save half the money.

"Nice work you'd make of it," said her husband. "You'd just about get the whole place torn up and then expect me to help you out. I've signed a lease for two years and we'll go ahead and have it done and have it done right."

But Mrs. Hamlin was determined and finally her husband gave in, first making her promise not to expect him to help her. If you do undertake this thing, Sally, you've got to go through with it," he said. "Only I advise you not to try it."

Sally said that was just what she wanted—to engineer the whole thing herself. She planned to have all the ceilings tinted—that would cost only \$6 altogether—and to paper the side walls with her own hands.

She spent three days hunting for bargains in wall paper and at last she bought enough for the rooms for \$14. She got bargains too, even if they were not exactly what she had planned to buy. Anyway she was \$30 ahead—that is, she would be when the paper was on the walls.

She had no trouble in getting the ceiling tinted to her satisfaction and then she began to strip off as much of the old paper as she could. The first night she looked so tired that her husband relented and finished peeling off the paper himself. She was grateful for that assistance, but when he said positively that the walls would have to be sized Mrs. Hamlin felt he was an enemy to her peace. But she had set out to do the thing right and so she procured some glue and with the paste brush which cost \$2, she sized all the walls.

She made a great pail of paste, according to the directions of the good-natured paperhanger who had made the estimate on her rooms in the first place. The same man let her have an old pasteboard, shears, knife and ruler. Mrs. Hamlin did feel a little guilty in borrowing these things when all she had bought of him was her paste brush, but then he seemed so perfectly willing to let her have them and even let his man carry them home for her.

She measured and cut her strips of paper without making a single mistake, and she was astonished herself that the paper went on so smoothly. It took her one whole day to bring two sides of the parlor to perfection, but then it was perfection, and she went to bed that night tired to the point of exhaustion, but happy.

She hurried through her morning's work, because she was anxious to finish the parlor that day. She opened the door at last and was in the middle of the room before she noticed anything strange. Then she simply stared, open-mouthed. Every strip of paper was loosened from the walls, and had either fallen flat to the floor or hung loosely in hideous bubbles and wrinkled.

It never occurred to this persevering worker that there was anything to do but to strip it all off, apply fresh paste, and once more brush it back on the walls. This she accordingly did, and also made good headway with the two remaining sides during the afternoon.

It was not without some feeling of anxiety that Mrs. Hamlin opened the parlor door the next morning. There was paper on four sides now to flop, to bubble, to wrinkle—and it had all happened! Clearly something was wrong.

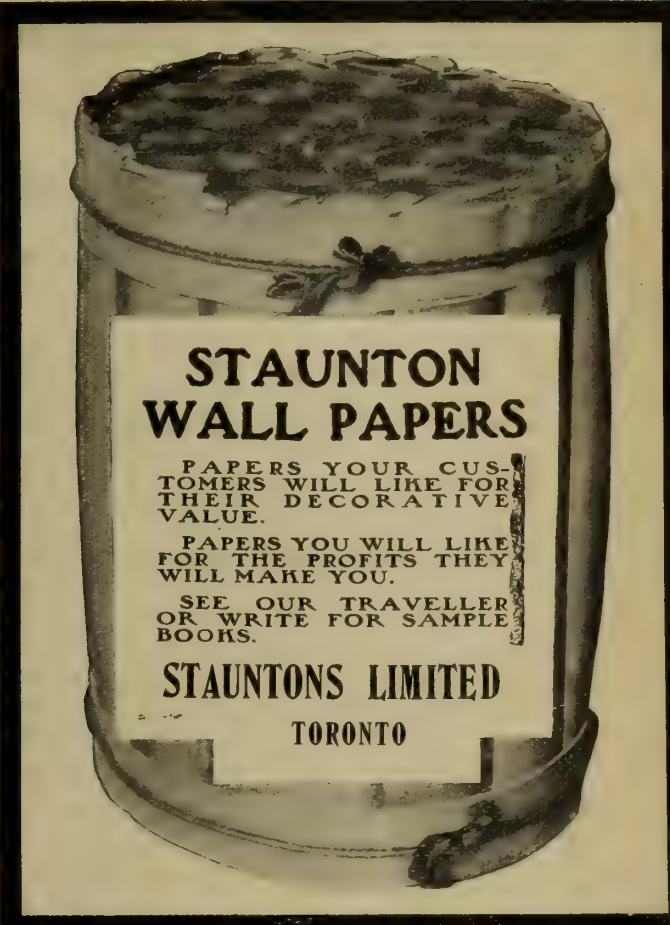
She went out to interview the paperhanger who had befriended her. She brought him over to the house. He looked at the hanging paper and the wall behind it.

"No wonder your paper won't stick; that sizing is like varnish. Who told you to put that on?"

"That was Mr. Hamlin's idea," she said doubtfully.

The man made an estimate of the cost of completing the rooms as follows: Washing off size and papering five rooms \$30; new paper for parlor, \$8. Mrs. Hamlin told him to go ahead.

After all it was not so much the collapse of her scheme to economize that Mrs. Hamlin cared about as the callous way her husband acted when he found it was all his fault.



**STAUNTON
WALL PAPERS**

PAPERS YOUR CUSTOMERS WILL LIKE FOR THEIR DECORATIVE VALUE.

PAPERS YOU WILL LIKE FOR THE PROFITS THEY WILL MAKE YOU.

SEE OUR TRAVELLER OR WRITE FOR SAMPLE BOOKS.

STAUNTONS LIMITED

TORONTO



**Something New
in Curtain Loopers**

Best Brass Wire with Copper Mount.
Assorted Designs. 8 inch Long. 1 PAIR ON A CARD.

J. NICKLIN & CO., Birmingham, England
Agent: F. P. ROGER, 30 Wellington St. W., Toronto.

PAINT, OIL AND BRUSH TRADES

The Cost of a Brush.

WHERE does the cost of a brush come in, is a question which many a dealer asks, but is not always able to secure a satisfactory reply to.

The most important factor in making up the cost of a brush is probably in the bristles as the cost of labor is a secondary item. In preparing bristles to make a satisfactory working brush, it is necessary first of all that the same should be sorted to various lengths and degrees of stiffness and taper. They are then washed and straightened, which is, perhaps, the most important process in making a brush, then mixed and finally prepared for the size required. This gives the stock required for a good working tool, but the smaller and inexperienced maker will simply take the bristles as they come from the cask, jab it into a ferrule and call it a paint brush.

Another feature not usually recognized by dealers who are asked to buy imported painters' brushes, is the fact that on every pound of bristles used in the brushes, a duty of 25 per cent. has to be added, whereas in the "made in Canada article" the bristles are brought in free of duty. Take a brush which cost a Canadian manufacturer \$6.00 per dozen to make, the cost of the imported article would be (exclusive of freight and other charges, and the profit of the importing jobber) \$7.50 per dozen or more money than the Canadian manufacturer is willing to sell the same goods for.

The Home of Shellac.

SHELLAC is produced in the East Indies in a most interesting manner. The resinous juice is drawn from the tree through punctures made by insects. These insects become covered with the juice, which soon dries on them, and under this resinous covering the larvae of the insects are developed, consuming the resin as they grow, and finally piercing the covering to escape. These burrowings are reddish brown in color, and constitute the shellac, which is at its best just before the larvae escape and should be collected at that point. The process reminds one of our ubiquitous potato bug and the development of its larvae under the leaf, which

first shelters it, and then furnishes its food.

When collected, the shellac is put through a purifying process respecting which the printed reports vary materially. One thing is sure that the astute Parsees have found out that there is such a thing as resin, and their generous use of the bright American article has, in these recent days, caused much dismay.

Shellac is used principally in the manufacture of knotting varnishes and lacquers for metal, wood and paper. I fear it is used also for undercoating wood where a more elastic substance might be substituted with advantage.—Paint and Oil Review.

Window Glass Trouble in Belgium.

THE Belgian window glass manufacturers are beginning to make combinations with French firms whereby it is hoped to sup-

ply their orders during the continuance of the strike, says the Paint and Oil Review. Thus it is reported that the factories l'Ancre in Charleroi and the French works at Aniche and a Jumet works have arranged with the Renard factory in Fresnes for the purpose of holding the trade of the Belgian firms. It is doubtful whether under such an arrangement Belgium's export trade can be maintained. Other factories are to follow this example, but it is difficult to see how, says the Budget, under such an arrangement, Belgium is to be benefited, since the firms of the latter country are only to act as agents for the French manufacturers. That a prolonged strike in Belgium would drive trade to competing countries was to be foreseen, but that the manufacturers would aid in building up the industry of France and ruin that of their own country, is certainly a new move, and evenly divides the disgrace between workmen and manufacturers.

To make your paint and varnish department pay depends upon the kinds you handle.

The goods you can always reply upon to please and satisfy are

"HOLLYWOOD" PAINTS

PASTE—READY-MIXED—FLOOR

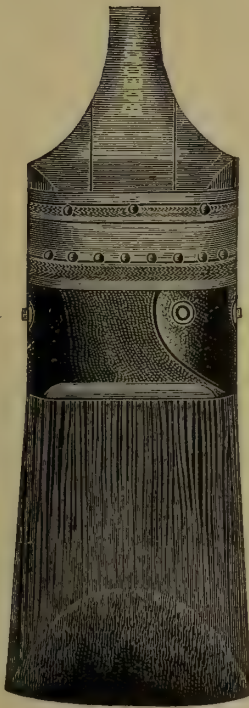
"IMPERIAL" AND "MAPLE LEAF"

VARNISHES AND SUNDRIES

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED.



THE HOLIDAY TRADE is now over. Ready sellers must come to the front at once to counteract the "dull season" which dealers very often experience after a rush season, unless some effort is put forward to keep the ball rolling. Our suggestion is that a number of every day lines, particularly A1 goods that have a reputation be prominently displayed. We mention specially

Boeckh's Mascot Flat Paint Brushes

An all black China Bristle line, good length stock, polished nickel ferrules, ebony color handles—a **very attractive** line and more than that one that is **sure to give entire satisfaction.**

ORDER NOW. DISPLAY PROMINENTLY AND WATCH THEM GO.

United Factories, Limited, Head Office: **TORONTO.**

BRANCHES:
MONTREAL
LONDON

If You Buy

Varnishes	Paints
Japans	Colors
Lacquers	Glues
Stains	Bronzes
Fillers	Chamois
	Sponges

WRITE TO

R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.

AMERICAN WINDOW GLASS CO. Pittsburg, Pa.

are now prepared to do business in Canada in

Machine Made Glass

for prompt and later deliveries. Good Quality Packing and Fair Treatment—our motto.

OUR BUSINESS IS NOT DELAYED BY STRIKES

WRITE US FOR QUOTATIONS.

GERALD LOMER,
Sole Canadian Representative, MONTREAL

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Jan. 6, 1905.

ALTHOUGH no change has taken place in the local market, considerable fluctuation has been noticed in linseed oil and kindred products. Large dealers are hopeful for a very much better year in 1905 than they had in 1904. Large orders for Paris green have continued and the report that stocks were depleted everywhere has been verified. Quotations on English and Canadian Paris green remain unchanged.

Turpentine—Single barrels, 78c per gallon; 2 to 4 barrels, 77c per gallon. For smaller quantities than barrels 5c extra per gallon is charged. Standard gallon is 8.6 lbs. The above prices are net thirty days, for longer terms prices are higher.

Linseed Oil—Raw, 1 to 4 barrels, 44c; 5 to 9 barrels, 43c; boiled, 1 to 4 barrels, 47c; 5 to 9 barrels 46c; delivered in Ontario between Montreal and Oshawa at 2c per gallon in advance.

Ground White Lead—Best brands Government standards, \$4.60 to \$4.75; No. 1, \$4.35 to \$4.50; No. 2, \$4.10 to \$4.25; No. 3, \$3.77 1-2 to \$3.87 1-2; No. 4, \$3.40 to \$3.50, all f.o.b. Montreal.

Dry White Lead—\$4.50 in casks, and in kegs, \$4.75.

Dry White Zinc—Pure dry in casks, 7c, in 100 lb kegs, 7 1-2c; No. 1 zinc, in casks, 6c, in 100 lb kegs, 6 1-2c.

White Zinc (ground in oil)—Pure, 25-lb irons, 7 1-4c; No. 1, 6 1-4c; No. 2, 5 1-4c.

Putty—Bulk in barrels, \$1.50; in 25-lb irons, loose, \$1.80; in tins, \$1.90; bladdered putty in barrels, \$1.75.

Orange Mineral—Casks, 7 1-4c; 100-lb kegs, 7 1-2c; smaller quantities, 8 1-2c.

Red Lead—Genuine red lead in casks, \$4.50 in 100-lb kegs, \$4.75; in less quantities at the rate of \$5.75 per 100 lbs; No. 1 red lead, casks, \$4.25; kegs, \$4.75, and smaller quantities, \$5.50.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

Litharge—Ground, in casks, 5c; in less quantities, 53-4c; flake litharge, casks, \$5.50; smaller quantities, \$6 per 100 lbs.

Paris Green—Pure English Paris green, petroleum barrels, 15 1-4c; arsenic kegs, 15 1-2c; 50 and 100 lb. drums, 16c; 25-lb drums, 16 1-2c; one pound paper boxes, 17c; one pound tins, 18c; one-half pound paper boxes, 19c; one-half pound tins, 20c. Terms, 2 per cent. off thirty days, or ninety days net from date of shipment. Government stand-

ard pure Canadian Paris green, barrels, 13 1-4c; arsenic kegs, 13c; 50 and 100 lb drums, 14c; 25 lb drums, 14 1-2c; one pound packages, 15c; half pound packages, 17c; one pound tins, 16c. Terms, 2 per cent. discount for cash in 30 days or 90 days net.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, Jan. 6, 1905.

ALTHOUGH the holiday season has ended, no material increase has taken place in the trade. However, as the travelers representing the majority of houses are on the road a better and brisker trade is expected. The firm condition of white lead has increased the sales of No. 1 which has hitherto remained unsold owing to the low cost of pure white lead. The condition of turpentine and linseed oil remains unchanged and no change is expected for a few weeks.

Glass conditions remain the same. Future conditions are hard to judge. A meeting of the manufacturers was held at Charleroi, Belgium, on Thursday, January 5. Many dealers take an optimistic view of the event and declare that the manufacturers will begin operations within a few days. Should they do so no glass could be placed on the Canadian market before three months, unless at a heavy cost. Stocks in England and on the Continent have dwindled down and as the European market uses a quality of glass far better than that used on the Canadian market, it is only natural that the manufacturer should

devote his attention first to that trade which brings the largest revenue.

The heavy demand for mixed paints during last season has left a mere skeleton stock among the majority of country merchants and the manufacturers are anticipating a heavy arrival of orders for Spring trade.

White Lead—Ex-Toronto, pure white lead, \$4.75; No. 1, \$4.37 1-2; No. 2, \$4 No. 3, \$3.62 1-2; No. 4, \$3.35 in packages of 25 lbs and upwards; 1-2c per lb extra will be changed for 12 1-2 lb packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs, \$4.25; ditto, in kegs of 100 lbs, \$4.50; No. 1, in casks of 500 lbs, \$3.75 to \$4; ditto in kegs of 100 lbs, \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 70 to 75c per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs; Gilders' whiting, 75c.

Shellac—Pure orange in barrels, \$2.75 to \$3; white, \$2.85 to \$3.10 per barrel; No. 1 (orange), \$2.25.

Linseed Oil—Our quotation is: Raw, 1 to 4 barrels, 44c; boiled, 47c; 5 to 9 barrels, raw, 43c; boiled, 46c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Another quotation is: Raw, 1 to 4 barrels, 45c; boiled, 48c; 5 to 9 barrels, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and Guelph, 2 per cent. off 30 days; net 30 days to outside points. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 75c; 2 to 4 bbls, 74c, Toronto; 5 bbls and over f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls, 77c; 2 to 4 bbls, 76c, ex Toronto; 5 bbls and over f.o.b. point of shipment, 2 per cent. off 30 days. For less quantities than

HAVE YOU THE GRIP

in your town on the trade in goods sold for wall tinting and decorating? It is easy to get your share of that trade, if you stock **Church's Cold Water**

ALABASTINE

Without it no dealer can expect to do much business in that line, because **Alabastine** is the goods wanted, and if not in stock, customers must necessarily go elsewhere for it.

The superiority of **Alabastine**, and the fact that it is advertised, has created the demand. **Have you the goods?**

Alabastine is made in twenty tints and white. Sold by jobbers in hardware and paints everywhere. Also by

The Alabastine Co., Limited, Paris, Ont.

1905

Foreword to Our Clients

LOOKING forward to the new page, 1905--the fourteenth of our united company—you will permit us to express our sincere good wishes to you for success and happiness.

WE have also specially to thank you for your constant mindfulness of us during 1904. We have had from you more letters, more enquiries, more orders, more expressions of satisfaction and good will, than in any previous year.

WE feel, therefore, justified in anticipating that your appreciation will bear the fruit of increased business in the new year, and we are providing accordingly.

OUR preparation began early, and as one result the Printing Department has already placed in your hands "Catalogue 1905," representing, as it does, the widest range of manufactures of any Varnish and Paint house in the world. This is no vain boast, but simply a statement of fact based on knowledge. In no other country does any one company manufacture from start to finish all the goods represented by the several great sub-divisions of our trade.

THE outcome has been that our Company being "first hands" in all departments, has established a standard of value which has NEVER been and cannot be excelled in the Dominion.

IN offering our goods to your consuming clients we support you to the letter in giving these assurances, and you will find their endorsement, as you have done in the past, in a growing demand for our brands.

WE have already provided material, during the months preceding opening of navigation to an extent never before attempted, and in the interval until you begin to hasten your shipments, we will work as busily in preparation as we will later in effecting shipment.

DO not hesitate to speak out when you think we come short of your expectations, this will help to bring us as near to perfection as we hope to get.

MEANTIME, be assured that we are before you, with you and behind you in our several relations, and we hope to be even more intimately associated than hitherto when page 1905 is written over.

THE CANADA PAINT COMPANY, LIMITED

SPECIAL TO THE TRADE

The Canada Paint Company

take pleasure in stating that with the enlarged facilities afforded by their new Color House they are now manufacturing for the coming season sufficient Pure Paris Green to supply the entire wants of the Dominion. Dealers will, therefore, be saved the annoyance of importing, the money will be kept in Canada and the quality will, as usual, be pure, uniform and not excelled by any other.

NOTE

Enquirers will please note that all quotations on Paris Green are for immediate acceptance only.

barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Ordinary, bladders in barrels, \$1.65; pure linseed oil, \$2 to \$2.10; bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.35 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 8 to 8 1-2c per lb and 9c for single tins.

Glass—See current quotations at the end of this issue.

Petroleum.

Refined—The amount of oil used this year is far in excess of former years and the prospects for a future increased consumption are very bright. The month of January, however, is always affected by the Christmas holidays and nothing of a very interesting nature is expected to transpire before the first of February. Prices continue unchanged. Our quotations are as follows: Canadian water white, 17c; Canadian prime white, 15 1-2c; American water white, 17 1-2c ex warehouse.

Crude—Prices have declined from 3c to 5c per barrel on American crudes. This change is due to a small demand and a large surplus stock. Our quotations are as follows: Pennsylvania, \$1.50; Corning, \$1.17; Newcastle, \$1.42; North Lima, \$1.01; Tiona, \$1.65; South Lima, 96c; Whitehouse, 96c; Somerset, 91c; Indiana, 96c; Canadian, \$1.47.

Window Glass.

MONTREAL.

The strike is still on in Belgium, and naturally a slight impetus has been given to the Canadian and American factories by the increased demand for glass. Manufacturers seem to have been very just in their demands, for no increase in price has been recorded although it is expected that an advance will take place shortly. Our quotations are as follows: First break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet, \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second

do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$10; fifth do., \$11.50; sixth do., \$12.50; seventh do., \$14; eighth do., \$16.50; ninth do., \$18; tenth do., \$20; eleventh do., \$24, and twelfth do., \$28.50.

The discount from diamond glass is 15 per cent. and from double thick is 33 1-3 per cent. Terms four months, and 3 per cent. discount 30 days.

BUSINESS CHANGES.

ONTARIO.

R. McLevy, blacksmith, Florence, has sold out.

J. Miller, painter, Lindsay, has been burned out.

McBride & Wiedeman, iron founders, Hamilton, have dissolved partnership.

Wm. Pirie, blacksmith, Beamsville, has been succeeded by F. & J. O'Gorman.

Welford Bros., manufacturers of ropes and brooms, London, have assigned in trust to A. Robinson.

The stock and property of the Teeswater Foundry, Teeswater, will be sold by auction January 12.

The stock of the estate of W. T. A. Fishleigh, hardware merchant, Wingham, has been sold to F. W. S. Davis.

QUEBEC.

P. Breton, Sr., contractor, Quebec, is dead.

A. Chatelle, contractor, Montreal (St. Henry), has received from his creditors a demand of assignment.

O. Plante & Fils, plumbers, Quebec, have assigned. A. Faucher has been appointed provisional guardian.

The stock of L. A. Robitaille & Co., hardware merchants, Quebec, has been damaged by smoke and water.

MANITOBA AND N.W.T.

G. E. Bryan, lumber merchant, Innisfail, has assigned to G. W. West.

R. F. Steele, lumber merchant, Treherne, has sold to Thos. Adair.

W. B. Shannon & Co., hardware merchants, Carberry, have sold to Ritz & Yoerger.

H. J. Fenner, dealer in agricultural implements, Wetaskiwin, has sold to O. E. Tomlin.

Mackay, Cochrane & Co., dealers in implements and lumber, Plum Coulee, have sold the lumber business to J. C. Graham.

NEW BRUNSWICK.

The planing mill owned by Wm. Currie & Co., Campbellton, has been burned. Insurance amounted to \$20,000.

NOVA SCOTIA.

Cape Breton Lumber Co., Svdney, have assigned.

J. White & Co., stove dealers, Halifax, have sold to A. C. Hiltz and J. Richardson.

THE SIMPLE LIFE

is being much praised by scholars, philosophers and teachers of reform.

In business the Simple Life is lived in part by selling the most reliable goods made.

No worry then; no shame.

WAGNER'S CARRIAGE PAINTS

promote the Simple Life.

They are the standard for quality and general excellence.

They are flattered by many imitations.

Our Catalogue tells more about them. Send for it.

STANDARD PAINT & VARNISH CO., Limited, WINDSOR, ONTARIO

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

We have about ten tons of No. 6 galv. wire which we offer at a snap. Quality guaranteed.

The Oshawa Wire Fence Co. Limited
OSHAWA.

McCaskill, Dougall & Co.

Manufacturers



RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

Get your GLUES from

The GROVE CHEMICAL CO., Limited

Appley Bridge, Lane, England.

Our ordinary grades are better than ordinary, and we can supply special makes for special purposes. SCOTCH GLUES, BOX GLUES, COLOGNE GLUES for Paper Makers. Size of all kinds. Send your name for our printed matter



A Popular, Profitable and Seasonable Line to Handle.

Dennis'
Flexible Steel Wire
Door Mats

DENNIS WIRE AND IRON CO.

Send for Catalogue.

LONDON, ONT.

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works or from the principal Color Dealers in Canada



Start the Year Right

By getting acquainted with
OUR SPECIALTIES

YOU COULD MAKE NO BETTER START

P. D. DODS & CO., Montreal Toronto Vancouver

MACHINERY

MACHINERY MARKETS.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, Jan. 6, 1905.

FROM the large machinery dealers and manufacturers, most encouraging reports are obtainable. Things are moving in large volume and from the United States, it is learned that so excessive has the demand grown for machinery of all kinds, that some difficulty may be shortly experienced in getting supplies. This, of course, applies to users of American machinery. There is a good demand all over for tools of both American and Canadian manufacture. Plenty of orders are in sight and, with new factories going up all over the province, Quebec would seem a fertile field for the machinery houses during the coming year. That one establishment, the Canada Car Company, has opened the eyes of the machinery world, in their amazing demand for equipment and machinery tools generally. What is a great credit to the large houses in Montreal and other cities of the province, is that, when machinery and equipment of different kinds were wanted quickly, the excellent stocks carried enabled the filling of the orders to be accomplished with great promptitude and precision. Reports from different quarters state that collections are very good and that trade enquiries are numerous and reliable.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East.
Toronto, Jan. 6, 1905.

THIS is a week of expectation on the machinery market. In general, there is not a great deal of business being done, although some local firms report a brisk week. Enquiries, however, are numerous and everyone is looking forward with great expectation to the coming year. Canada is progressing rapidly, and 1905 will, from present indications, show even greater industrial progress than the past year has shown.

One local firm reports a good demand for machine tools, better than has been for some time past. Engines and boiler

ers are not having the demand that they had some weeks ago. Wood-working machinery has a good demand.

New Compound Gas Engine.

ACCORDING to the Iron Age a compound gas engine has been built with two high-pressure cylinders and a single low-pressure cylinder between them. The high-pressure cylinders work on the Otto cycle, the engine receiving one impulse from them each revolution. The exhaust from the two explosions is expanded in the low-pressure cylinder, the crank of which is 180 degrees behind the high-pressure cranks. Thus at every forward stroke the low-pressure cylinder takes the exhaust gases from one of the high-pressure cylinders. The total effect is thus to produce an impulse every half revolution. With a 12 h. p. engine 13 brake h. p. were obtained with the low pressure cylinder in use, and only 8.9 h. p. without it, 46.2 per cent. being thus added to the power by the use of the low pressure cylinder and without the expenditure of any additional fuel.

Engineers and Technical Education.

J. SWINBURN, past president of the British Institute of Electrical Engineers, in an address to a body of engineering students, expressed his views regarding technical education and its value to engineers. He says that the great difficulty is to keep knowledge in a polished state ready for immediate use. In practice it may have to lie idle for long periods, and then be wanted on very short notice. He thinks that this fact is overlooked by a great many who write about technical education. The only thing to do is to treat knowledge as a huge district into which one's life is long enough to make some very little roads.

Mr. Swinburne says that the tendency is for education to become more and more impractical as time goes on, and that the average science teacher has an altogether wrong idea of the relation of science and business.

He claims that at the head of large industries will be found commercial or business men with little or no technical knowledge; and that the engineers who

make the largest incomes and occupy the most important and responsible positions are those who have the most business or practical knowledge. Leading consulting engineers do not spend a large portion of their lives plotting curves or even making anything more than mathematical calculations. They spend their time dealing with large questions purely commercial lines; and as a rule the greater the engineer, the more he knows about practice and business, and the less he knows of the text-book knowledge.

Machinery and Electrical Notes.

On January 2nd, the freeholders of Milton voted on a by-law to provide for the purchase of the plant of the Milton Electric Light and Power Co.

Canada Foundry Company, Toronto, dismissed all of the employees of its machine shop, about two hundred in number, on Saturday, December 31st.

Haines Bros., New York, have received the contract for building the road of the Hamilton, Ancaster and Brantford Electric Railway Company.

Work on the construction of the Vancouver Portland Cement Co., Victoria, is being rushed forward very quickly. It is estimated that the machinery will be installed very shortly.

A large zinc smelter in connection with the Crow's Nest Pass will be erected at Frank, B.C. The new plant will be the largest of its kind in Canada, and will be able, beside treating ores for zinc, to treat for silver and lead.

New Contracts.

Among the contracts the Jones & Moore Electric Co., Limited, are now working on are, an electric motor and electric plating dynamo for W. J. Cummings, Winnipeg; an electric generator for the Page-Hersey Iron and Tube Co., Guelph, Ont.; an electric lighting plant for the McCann Milling Co., Toronto; two 500 light dynamos, direct connected to Robb engines for the W. A. Murray Co., Toronto. The firm have also just completed the installation of a complete electric lighting plant for the Stratford Chair Co., Stratford, Ont.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the
NIAGARA WIRE LINK
OPEN RING TYPE.

Also made in **CLOSED RING, THREE CHAIN**
and **DOMINION (or "Short") TYPES.**

Oneida Community Cow Ties can be had of all the leading jobbers. We invite correspondence where any difficulty is experienced in obtaining our goods.

ONEIDA COMMUNITY, Limited
NIAGARA FALLS, ONT.



RETURNED To Owner
JAN 20 1905
Cut Book 29. Page 1

AGITATE

A large proportion of the Hardware Merchants of Canada are going to add considerably to their profits for 1905 by handling and pushing the sale of

FAIRBANKS Renewable Disc VALVES

Are you going to be among these?
Every Hardware Dealer is asked for Valves.
No customer ever asks for a poor valve.
Fairbanks Valves are the best Valves made.
They give satisfaction wherever used.
We manufacture them for all purposes.
We stand behind the quality of our Valves.
If you sell them we back you up.

Therefore we say, **AGITATE.** Order a stock of Fairbanks Valves and start pushing them. You will find them a profitable line. Valves never become shop worn.

SEND FOR CATALOG.

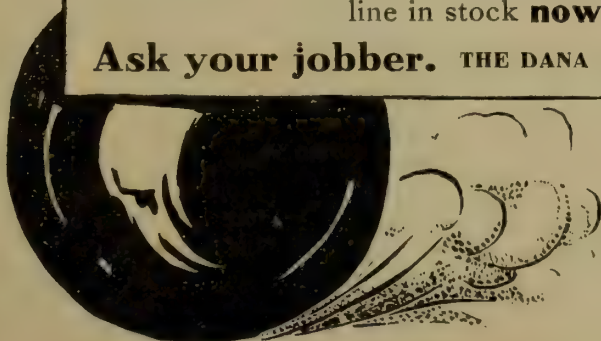
THE FAIRBANKS CO.,
Montreal Toronto Vancouver Winnipeg



A force which has become the greatest factor in freezer selling to-day is **Peerless Iceland advertising**

It is not only the best *freezer* advertising—it is one of the strongest campaigns ever organized to push the sale of a household article. Peerless Iceland ads cover every field from Maine to the western coast. To hold the trade they send you, you ought to have a line in stock **now.**

Ask your jobber. THE DANA MFG. CO., Cincinnati.



THE WARNER CUT-METER.

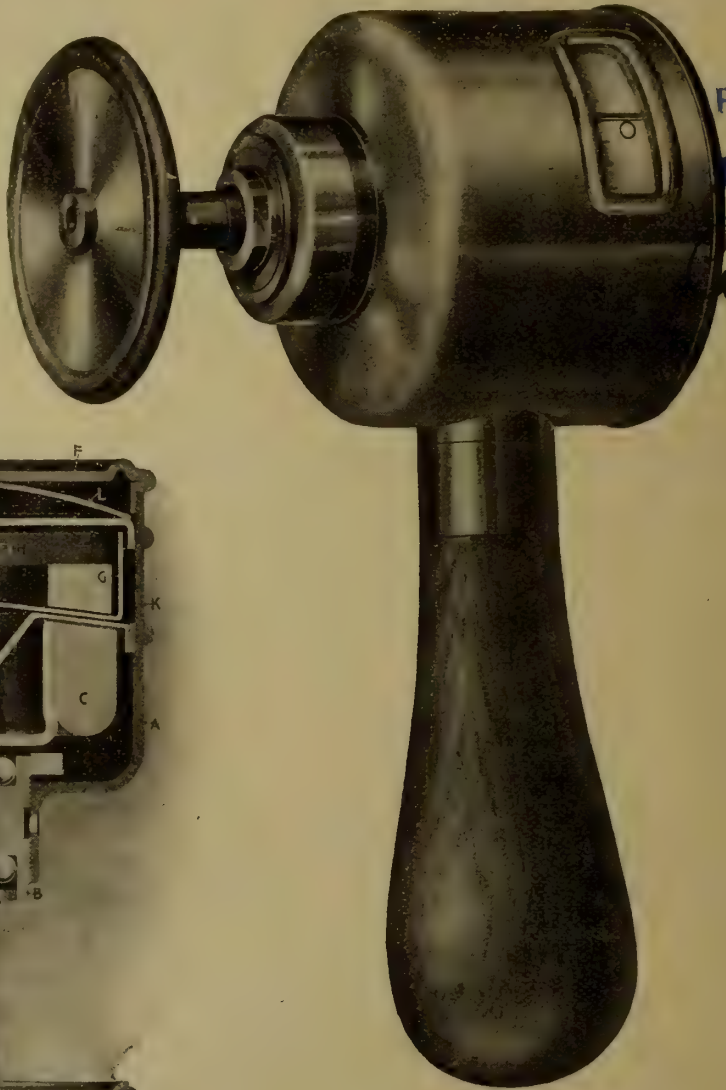
THE Cut-Meter is a combination of the tachometer and a wheel with a certain outside circumference, the tachometer being calibrated so that every foot traveled by the circumference of the wheel registers one foot upon the dial. For instance, if the circumference of the wheel is exactly one foot, it requires only one revolution of the tachometer shaft to register one foot. If the wheel is six inches in circumference, it can readily be seen that it will require two revolutions of the tachometer shaft to indicate one foot on the dial, so that it only remains to properly calibrate a tachometer in order to get the direct reading in feet per minute.

Having these two facts as a basis, it appeared a simple problem to produce the Cut-Meter. But it was absolutely necessary to have a portable tachometer possessing the prime essentials of accuracy in any and all positions; the construction being such as would stand the necessary wear and tear without changing or affecting its calibration. Here the difficulty began, because previ-

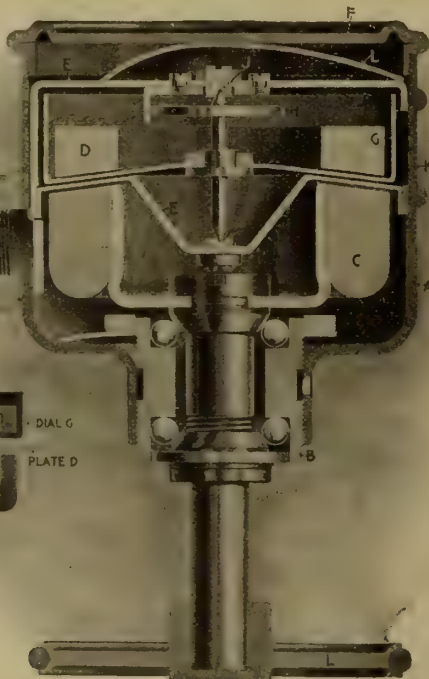
ously a steel ring (d), which deflects the lines of force through the aluminum disk (g). This disk is mounted on a hardened steel shaft, and is supported by the jewels (j). On the outside edge of the aluminum disk are engraved the figures indicating the speed. Also attached to this shaft is a hair-spring (h), so adjusted that it resists the turning of the aluminum dial and brings it back to the zero point when the magnet is at rest. The jewel bearings and the steel ring

low or gutter shaped periphery, into which is snapped a miniature rubber tire (m).

In this figure is also illustrated the arrangement of the poles on the permanent magnet. The lines of force flow from the north pole through the aluminum dial (g) to the steel plate, and back again through the dial to the south pole of the magnet (c). When the magnet is revolved it sets up an induced or accessory action, in the dial (g), this action or rotation being in proportion to the speed of the magnet,



Warner Cut-Meter.
(Full size).



Cross Section of Cut-Meter.

RETURNED

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ous to the invention of the Warner Magnetic Tachometer, there was no instrument which would fulfill the conditions.

The accompanying illustration shows a cross-section of the instrument. The magnet (c) is carried by the ball bearing (b). The outside is threaded and ball bearing is secured by a spring washer, and can be turned only with a specially shaped wrench, as it is not intended to be moved except in our factory. In front of the magnet is a soft

are carried by the inner case (e), which telescopes into the outer case and can be removed at will. The inner case also serves the purpose of protecting the dial (g) from the air currents set up by the magnet when in revolution. Through both outer and inner case is an opening, covered by the glass (k), through which the figures on the aluminum dial can be read. Attached to the main shaft is the driving wheel, or disk (l), of proper diameter, having a hol-

and as the hair-spring is subject to the same law, it is evident that increasing the speed of the magnet will increase the displacement of the dial in exact proportion. The dial or scale can therefore be marked by equal divisions from the lowest to the highest reading. Since adjusting the magnet closer to the steel ring increases the torque, or induced rotation, it is only necessary to select a hair-spring of proper stiffness, revolve

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

WORK AND PRICES RIGHT GALVANIZING ONT. WIND ENGINE & PUMP CO. TORONTO, ONT. LIMITED.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works
"Machinery," Newport. NEWPORT, MON., ENGLAND



"The Tool Holder People"

Armstrong Bros.

Tool Company

Manufacturers of Armstrong Patent Lathe and Planer Tools and other machine shop specialties.

617-621 Austin Ave., CHICAGO, ILL.

STREET PAVING and SIDEWALKS a SPECIALTY

SILICA BARYTIC STONE CO.

OF ONTARIO Limited
Head Office:

Ingersoll, Ontario.

Walter Mills, General Manager
Ask for quotations for Septic Tanks.

Water Proof Floors for
Malt Houses, Breweries,
Slaughter Houses,
Cheese Factories, Cellar,
Stable Floors, etc

"MAPLE LEAF"

Stitched Cotton Duck Belting



MADE IN CANADA

MADE IN CANADA

"Maple Leaf" is made of the best cotton duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.

"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying

Main Drive Belts a specialty.

Ask for "Maple Leaf" and take no other.

Beware of Imitations

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY

HAMILTON, ONTARIO. Limited

Use our "MAPLE LEAF" Belt Dressing.

HARDWARE AND METAL

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER.

We have arranged to carry a large stock of Square and Hex Cap Screws, Square Set Screws, Bright Bolts, Washers, etc., in Canada, and can deliver from Canadian stock after February 1st., 1905. It will pay you, if you are a buyer of these goods, to get in touch with us.

Temporary Offices

25 Queen City Chambers, Church St., TORONTO.

Clauss Brand

Fancy Oxidized Embroidery Scissors

FULLY WARRANTED

Hand forged from finest steel. Pressed handles hardened in water.

Full crocus finish. Finely oxidized and nickel-plated

CLAUSS SHEAR CO., 169 Spadina Ave., TORONTO, ONT.

I. A TOBIAS, Canadian Agent.



H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels

Superior in Design, Workmanship and Finish, and the most popular Gun on the Market.

Simplest
"Take Down"
Gun Made



HARRINGTON & RICHARDSON ARMS CO.

Also makers of H. & R. Revolvers.

Catalog on request. Worcester, Mass., U.S.A.

BABBIT

QUALITY & PRICE TO SUIT
ALL GRADES OF WORK.

THE

CANADA METAL CO.

NO. 1
STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.

Cap Screws, Set Screws,
Machine Screws,
Cold Pressed Nuts,
Studs, Coupling Bolts,
SPECIAL MILLED WORK, Etc.

CANADA FOUNDRY CO., Limited

Head Office and Works; TORONTO, ONT.

DISTRICT OFFICES,

MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
CALGARY, VANCOUVER, ROSSLAND,



the magnet at a known speed, at the same time adjusting the ball bearing until the scale indicates the correct speed. The instrument will then be accurate over the entire range of the scale and will remain so permanently, there being no necessity for subsequent adjustment or recalibration. As there are no mechanical connections between the magnet and the indicating dial, and as the magnet runs very easily (there being always an abundance of power to drive it), there can be no possible inaccuracy develop at this point.

The indicating dial is mounted on a steel shaft, the points of which are hardened and supported in sapphire jewels, practically eliminating all friction or retardation. How perfectly this is accomplished can be judged from the fact that a change in speed of one-fifth of one per cent. is shown on the dial. It should not be thought that because this disk is mounted on jewels that the instrument is a delicate one requiring careful handling. Since the dial and shaft are very light, the strength of the jewels and pivot is very great in comparison to the weight, and experience has shown that they will stand the regular service likely to be given in any ordinary machine shop. So certain are we of this point that we guarantee, for a period of one year, to repair free of cost any instrument returned to us, provided it has not been tampered with, and that the outer case is in a reasonably good state of preservation.

A complete full-size picture of the Cut-Meter is also shown. The instrument is sufficiently small and light so that it can be carried in the pocket without inconvenience. It presents a very handsome appearance, being substantially constructed of brass and nickel plated. The handle is turned from hard tropical wood and is highly polished.

The machine shop manager, who with one of these instruments tests every machine in his factory, will be surprised at the results and will be astonished at the great difference between what he supposed his cutting speeds to be, and what the instrument shows them actually to be. He will find in ninety per cent. of tests that working speeds are from twenty-five to fifty per cent. slower than they ought to be in order to obtain the most profitable results. If this same manager will purchase a Cut-Meter for every machine, and see that they are intelligently used, he will be more and more pleased and rewarded by the results obtained. A saving of only one per cent. would cover the entire cost of the installation of Cut-Meters in

one year, and there would probably be a saving of twenty-five per cent.

The Cut-Meter is manufactured by the Warner Instrument Co., Beloit, Wis.

Motors for Sarnia Tunnel.

The Grand Trunk Railway Co. are seriously considering the installation of electric motors in the Sarnia tunnel. This is information which the Railway Commission have learned from Fourth Vice-President McGuigan of that company. The proposed change will necessitate an outlay of between \$300,000 and \$400,000. There will be required a power plant, storage system, third rail and four electric motors.

New Machine Shop.

R. Anderson & Co., machinists, 111 Adelaide street west, Toronto, are preparing to erect a new machine shop on corner of Farley avenue and Esther street. The building will be a two storey building with basement. At first the firm propose to occupy the basement and ground floor, and rent the upper floor. For power purposes Mr. R. Anderson says they intend to install an 8 horse power gasoline engine. It is possible that extra machine tools will be needed.

More Small Motors Used.

In reviewing the features of last year's trade, W. A. Johnston, president and engineer of the United Electric Co., Toronto, says that the most notable feature has been the rapid increase in the number of small electric motors manufactured and sold. Instead of installing large motors for the entire plant, manufacturers are buying small motors for individual machine drive. This is to be noted in all kinds of machinery, including machine tools, wood-working machinery and printing presses.

Driven by Gas Engines.

The California Gas & Electric Corporation, San Francisco, Cal., has just placed an order with Crocker-Wheeler Co., Ampere, N. J., for three 4,000 k.w. capacity, 3-phase, 13,200 volt, 25 cycle, 88 r.p.m., revolving field alternating current generators, to be driven by 5,400 h. p. gas engines built by the Snow Pump Co. These generators are the largest in capacity in the world driven by gas engines, and will furnish power for operating all the street railways in San Francisco and vicinity. The Canadian representatives of the Crocker-Wheeler Co. are the Packard Electric Co., St. Catharines, Ont.

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

SITUATIONS VACANT.

MACHINIST WANTED—All round man; A man need only apply. Elliott Mfg. Co., Richmond St., Toronto.

WANTED—Machine hand—young, energetic man preferred, with some knowledge of hardware specialties; must understand the manufacture of dies for stamping steel and other work; if entirely satisfactory, may secure the foremanship of a department; steady employment to competent hand. Apply at once, Box 205, **HARDWARE AND METAL.**

MACHINERY WANTED.

Items under this heading inserted free for readers of **HARDWARE AND METAL**

WANTED—Second-hand lath machine. Geo. A. Watson, Proton Station.

MULE—240 or 280 spindles—20 ends—2½ inch gauge; also 48 inch first breaker; both in first class order. O'Hare & Sons, Midland, Ont.

WANTED—Second-hand emery grinder, also 150 feet 4 inch and 40 feet 8 inch belting. Ramage, foot Berkeley. Toronto.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

BOILER FOR SALE—60 h.p., second-hand, return tubular boiler, good as new; bargain. Address Box 41, **HARDWARE AND METAL.**

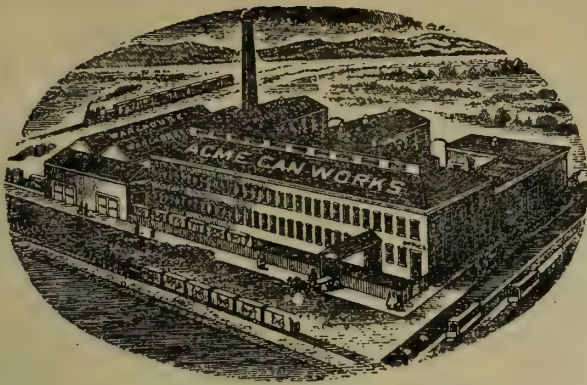
ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, **HARDWARE AND METAL, Montreal.**

FOR SALE—Sawmill machinery, modern sawmill machinery by best American manufacturers. Used but short time, at very low prices, owing to failure of log supply. Immediate delivery. Detailed description and prices upon application to Detroit Lumber Co., Detroit, Mich.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, **Montreal.**

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, **Montreal.**

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.



**When In Need of Cans, Serve Your
Best Interests and Consult Us.**

Acme Can Works make the largest assortment of any factory in America of **TIN CANS** by the latest up-to-date automatic machinery.

We are the only makers in Canada of
KEY-OPENING MEAT CANS, POULTRY CANS.

They are our specialties.

Manufacturers for Canada of—

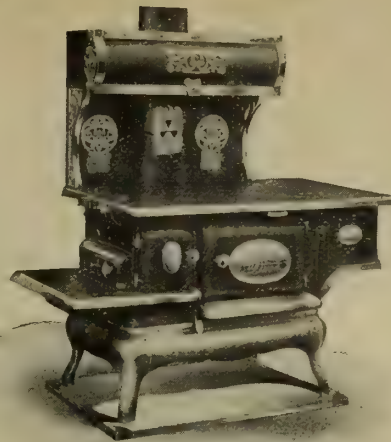
Jewett's Self-Heating Can.

We solicit inquiries for prices on

**Baking Powder, Oil,
Syrup, Lye, Paint,
Varnish, Condensed Milk,
Poultry, Fruit, Vegetable** } **Cans** **Lard,
Syrup,
Butter** } **Pails**

ACME CAN WORKS

Ontario Street East, - - MONTREAL, P.Q.



**AGENTS
WANTED**



The Empire Queen Range

is **ALL** good—a sensible stove, made in a sensible way, with every device of tried merit. Its three cardinal points are

Economy Efficiency Appearance

It excels in all three. Agents wanted. Write us about it.

The Canadian Heating & Ventilating Co.

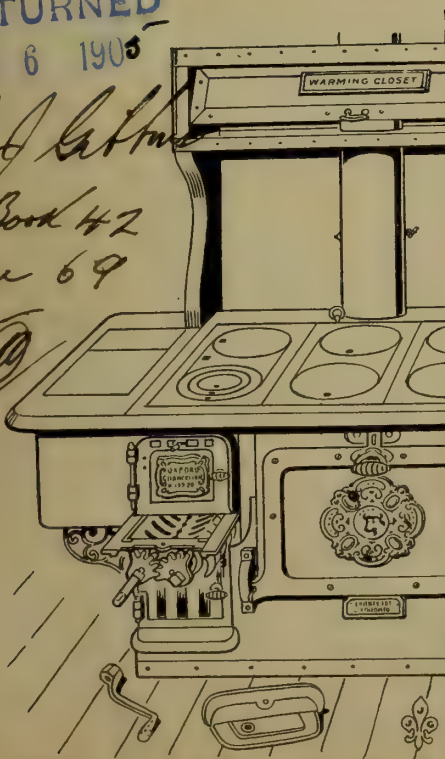
OWEN SOUND, ONTARIO. Limited

OXFORD CHANCELLOR RANGES

RETURNED

NOV 6 1905

S. J. J. LaPlante
Art Book 42
page 69



are built on a commodious plan. The oven is large and roomy, with a drop door, balanced so it will not fall violently. There are two adjustable pressed steel oven racks. The oven is designed on our most modern plan and gives good, quick cooking results. The dampers are simple in operation, but very effective, it being easy to adjust the temperature of the oven to the exact degree required. The system of ventilation is perfect—all fumes of cooking being carried away immediately.

There are two three-inch spaces between the oven and the floor, preventing its being scorched as often happens with the low grade steel range.

The Oxford Chancellor Range can be fitted to burn hard or soft coal or wood.

This is a range that will please and satisfy your most exacting customers. Order early as the demand is very large.

The Gurney Foundry Co., Limited

Toronto

Winnipeg

Vancouver

CORRESPONDENTS: The Gurney-Massey Co., Limited, Montreal, Que.;
The Gurney Standard Metal Co., Limited, Calgary, Alta.

TO MANUFACTURERS' AGENTS:

HARDWARE AND METAL has enquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of enquirers in our various offices throughout Canada and in Great Britain without charge.

Address **Business Manager**

HARDWARE AND METAL
Montreal and Toronto.

YORK METAL POLISH

(Liquid or Paste)

—be sure it is

YORK

None other so good.

10c SIZES AND UPWARDS.

YOUR JOBBER SUPPLIES IT.

ANGLO-CANADIAN SUPPLY CO.

29 Church-St., TORONTO.



OAKEY'S The original and only Genuine Preparation for Cleaning Cutlery. 6d. and 1s. Canisters
'WELLINGTON'
KNIFE POLISH

JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

JOHN FORMAN, 644 Craig Street
MONTREAL.

IF YOU INTEND MAKING ALTERATIONS WRITE US FOR PRICES AND PARTICULARS OF OUR

Hardware
Shelf
Box.



We can make boxes to fit your present shelving

...THE...

Bennett Manufacturing Co.

PICKERING, ONT.

STOVES AND TINWARE.

Stoves, and What They Are.

UPON investigating the early history of stoves, we find that they were in use in ancient times. Before iron entered into their construction stoves were made of brick work and clay. The brazier filled with live coals and placed in the middle of the apartments of the ancient Greeks and Romans, and which antedated the fire place and chimney, may have suggested the idea of the modern stove. It was not until the fourteenth century that chimneys were constructed. Then followed the first production of cast iron, in the fifteenth century, and in the year 1490, in the Province of Alsace, the first cast iron stove was made. Thus, molded iron, together with sheet iron and sheet steel, compose the material out of which the stoves of the present time are manufactured. Among the early foundries in the United States that made cast iron stoves was the Federal Furnace, erected in 1794 in the town of Carver, Mass.

Cast iron was rare in the United States before the Revolution, although the manufacture of iron dates from a period soon after the settlement of the country. During the four centuries in which stoves have been made from cast iron improvements have been added as civilization advanced. The advance made was from fire place to grate, from grate to the plain stove and from the plain stoves to those adorned with elaborate nickel trimmings. The fuel that modern stoves burn is wood, coal, coke, gas, oils, etc.

On account of the great variety of stoves manufactured at the present time, it is necessary to divide them into classes. In one class we have cooking stoves, in another class heating stoves. These two classes are subdivided into ranges and flat top cooks and single and double heaters, with furnaces, hot water and steam heaters in a class by themselves. From this very brief outline we are enabled to conceive how, through necessity, mankind has invented and improved an article for his comfort and convenience.

How similar are the requisites of the human body to the requirements of this article of necessity. Stoves must be fed in order to perform work. They are

cold when fireless and warm articles when aglow with fuel. The same is true of the physical body. Stoves receive commendation when they perform their duty well, but are grossly condemned when they will not work satisfactorily. The same feeling is frequently expressed among men. A stove must be given an opportunity in which to prove its worth, but there are times when it is falsely accused, because the fault is in the chimney. Men must have opportunities in order to attain successful careers, but frequently they meet with obstacles that prevent them from proving their true worth. The fault may be in their environments.

The handsome design of a stove frequently attracts the purchaser, while a homely pattern is severely criticised, although the latter is fully as capable of rendering good service as the former. The pretty face of an individual receives admiration while ugliness is frequently despised and shunned. A stove may be attractive in appearance, yet be made of thin castings and hence not durable. Men may have attractive manners, appearing well upon the surface, but inwardly they may have no stability. Stoves have names in order that they may be distinguished one from the other. Likewise, men are designated by their titles. Some stoves are subjected to the drudgery of a kitchen, while others, bedecked with nickel trimmings, comprise part of the furniture of a parlor. Some people perform menial labor in order to eke out an existence, while others, attired in costly robes, live in ease and luxury. When a good stove has become worn out in service the owner dislikes to consign it to the scrap pile. When a man living a life of usefulness is retired from active service his friends dislike to be separated from his companionship. Such are a few similarities of stoves and human beings. In other words, it is shown that man, in a measure, regards these inanimate objects the same as individuals.

The example that stoves present to us as salesmen is to make good use of opportunities, the performance of duty irrespective of surroundings and the observance of the rules of action. Every stove is dependent upon some person to operate it.



Solarine Bar Polish

Best and cheapest preparation for polishing:— Brass, Copper, Steel, Tin, Zinc, Bar Fixtures, Kitchen Utensils.
A rapid cleaner expressly designed for all kitchens.

For Ontario, Address

H. F. FALKNER,
60 George St., TORONTO

A PERMANENT and Handsome Roof.



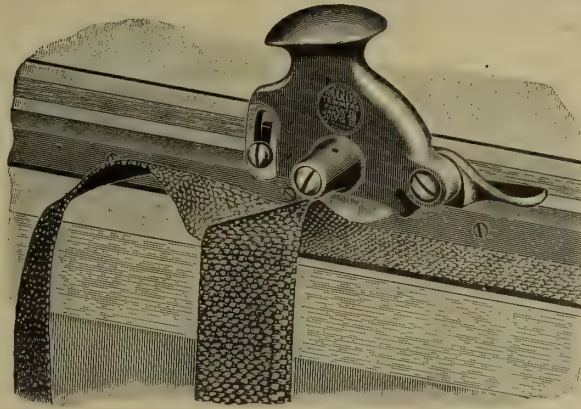
Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write to-day.



Don't book your order for lanterns until you see our improved **COLD BLAST LANTERN** and get our prices for 1905.
We lead, others follow.
HAMILTON, ONT.
E. T. WRIGHT & CO.,



Ridgely's Model B Trimmer

In conjunction with our famous **THREE-PIECE STRAIGHTEDGE** makes an outfit for trimming paper that will do the work in one-sixth the time it takes to do it with a knife or shears, and do it accurately. Guaranteed to give perfect satisfaction.

For full particulars address
THE RIDGELY TRIMMER CO.,
Manufacturers,
Paper Hangers' Supplies,
SPRINGFIELD, OHIO, U.S.A.

Send for Catalogue No. 16.

Montreal Steel Works, Limited

AGENTS FOR

THOS. FIRTH & SONS., LTD.

SHEFFIELD, ENG.

Tool Steel Axe Steel Double Shear Steel Blister Steel
Firth's Speedicut High Speed Steel Pivot Valve Steel Files, Etc.

Canal Bank, Point St. Charles, - MONTREAL

AFTER CHRISTMAS THE USUAL CRY IS, WE'RE STRAPPED

**Start
Saving
Money
at once.**



**AVOID CLAIMS
AND
DO AWAY WITH
ANNOYANCE
THROUGH
GOODS BEING
LOST OR
STOLEN IN
TRANSIT.**

STRAP YOUR CASES.

J. N. WARMINTON, 43 Scott St., Toronto; 207 St. James St., Montreal.

PATENTED SPECIALITIES FOR THE SHIPPING DEPARTMENT.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

FOR the first time in Canadian history the home market will demand two hundred thousand tons of steel rails, during the season of 1905. The outlook on the Canadian market never appeared brighter. With the Grand Trunk Pacific and Canadian Northern Railways buying it is expected that the present output at the Soo will be inadequate to meet the demand. These prevailing conditions almost assure the success of the Dominion Iron and Steel Company's rail mill which is nearly completed.

* * *

The directors of the Rossland-Kootenay Mining Co., Limited, have issued their report and account for the year ending August 31st last. Owing to the difficulty of obtaining satisfactory rates from the smelters, the shipments of ore during the year were greatly restricted. The profit and loss account shows a credit balance of £8,898.

* * *

From the monthly statements of pig iron produced this year, that for December being estimated somewhat larger than for November, the total will be about 16,100,000 tons. This compares with 18,009,250 tons in 1903; 17,821,305 tons in 1902; 15,878,354 tons in 1901, and 13,789,242 tons in 1900, the latter being the largest annual production up to that date.

* * *

A new sawmill and a sulphite plant will be erected at Swanson Bay, B.C. After the manufacture of pulp is well under way, it will be shipped to England. The sawmill will have a capacity of 40,000 feet per day and the sulphite plant will be capable of producing from 35 to 40 tons of sulphite pulp daily. It is the intention of the company—the Canadian Pacific Pulp and Paper Co—to erect at no distant date, a paper mill in connection with the above plants.

* * *

The steel rail industry of the United States is very active at present. The New York Central road has placed an order for 12,000 tons and the Delaware, Lackawanna and Western road has placed an order for 6,000 tons. Some orders

calling for 5,000 and 8,000 tons have been received by the Pittsburg plants from bridge constructing firms in Cincinnati, while an order for 14,000 tons for bridge work for the Harriman lines is still pending. Numerous inquiries have been received from Mexico and business of a large order is expected to be transacted very shortly. The United States Steel Corporation have now on their books 425,000 tons of rails for next year's delivery.

* * *

The holders of the preferred stock of the United States Steel Corporation will this year receive in dividends a grand total of more than \$25,000,000. This sum will be divided among about 43,000 shareholders. As a dividend payer the United States Steel Corporation is exceeded only by the Standard Oil Company, which this year paid \$34,920,000 in dividends. Since it was organized in 1901 the Steel Corporation has paid a total of \$172,458,000 in dividends to common and preferred stockholders. Since its organization the Standard Oil Company has paid \$242,900,000 in dividends to stockholders. There are only 970,000 shares of Standard Oil stock and there is understood to be less than 1,000 stockholders. There are more than 8,000,000 shares of common and preferred stock of the Steel Corporation and close to 100,000 shareholders.

NOTES.

It is rumored that Mr. Whitney, the owner of the copper smelting plant at Pictou, has sold the property to a syndicate of American capitalists.

Petroleum and coal have been discovered near Chambord Junction, Quebec. Both the class of coal and petroleum found are said to be of the first order.

The latest sensation in the Kootenays is the finding of ore giving values ranging from 160 to 240 ounces silver and from \$10 to \$60 per ton gold, with three per cent. copper.

The coal shipments of Nova Scotia this year amount to a total of 4,367,000 tons. This amount is from six collieries. Unless the others produce among them

325,000 tons the yield of 1904 will be lower than that of 1903.

An important mining deal has gone through at Salmo, South Nelson, B.C., whereby the Kootenay Bell group of mineral claims has been bonded by Patrick Clark, the millionaire mining operator of Spokane, for a hundred thousand dollars.

COMPANIES INCORPORATED.

Erie Iron Works, Limited, St. Thomas, share capital \$40,000; purpose to buy iron and wood and manufacture industrial products thereof. The directors are: M. Risdon, W. G. Rogers and Wm. Risdon, all of St. Thomas.

Henry Disston & Sons, Toronto, share capital \$100,000; purpose to manufacture and sell machinery, saws, files and all kinds of mechanical tools. The directors are: H. Disston, Wm. Disston and H. C. Disston, all of Philadelphia, Pa.

Wahnapitae Power Co., Sudbury, share capital \$250,000; purpose to manufacture and generate and supply steam, electricity and natural gas for heating and lighting purposes. The directors are: F. Cochrane and Wm. McVittie, both of Sudbury, and C. A. Maston, of Toronto.

Brooks-Smith Hardware, Limited, Toronto, share capital \$75,000; purpose to manufacture and sell hardware, mantels, grates, tiles, implements and machinery. The directors are: E. J. Creeper, J. Brooks, W. M. Smith, W. Brooks, W. H. Carrie, and H. Symons, all of Toronto.

The B and T Roller Bearing Window Co., Toronto, share capital \$30,000; purpose to manufacture and deal in roller bearings, window shades, window frames and builders' hardware. The directors are: A. J. Jackson, E. A. Badenach, A. B. Lee, E. J. H. Pauley, and Wm. Bentley, all of Toronto.

Reading Mining Co., Toronto, share capital \$250,000; purpose to carry on in all its branches the operations of a mining, milling, reduction and development company. The directors: I. Hollenbach, T. C. Seidle, P. Geisewite, and H. Kramer, all of Reading, Pa., and H. J. Tharle, of Buffalo.

The Standard Brick and Tile Co., Winnipeg, capital stock \$40,000; purpose to manufacture brick, tile, pipe, and all other articles manufactured from the products of the earth; also to manufacture artificial stone, plaster, etc. The directors are: G. F. Carruthers, R. W. Gardiner, E. A. Delius, R. J. Gardiner, and H. J. Carruthers, all of Winnipeg.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office.

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,
Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP.
Warren White Sulphur Springs,
Totten P.O., Virginia.

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish
Chemical and Drysaltery Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.

19 LUDGATE HILL - LONDON, ENG.

Order a stock of

"Windmill Best"
Galvanized Sheets

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, Montreal



DON'T INVITE TROUBLE

By Buying Imitation FIRE, Water, Dust and Air-Proof SKYLIGHTS. **BUY THE GENUINE.** Our pamphlet will tell you about "OUR IMPROVED."

Manufacturers and Contractors
of

Metal Fireproof Windows
CORRUGATED IRON

Cornices, Metal Ceilings, Sidings and all other Metal building goods.

A. B. ORMSBY LIMITED,

Cor. Queen and George Streets,
TORONTO, ONT.



This design a guarantee of quality

WRAPPING PAPERS

ALL GRADES, AND BEST OF EACH
GREY, RED-BROWN, MANILLA, FIBRE, TEA, ETC.

SAMPLES AND PRICES
FOR THE ASKING.

CANADA PAPER Co.

TORONTO LIMITED MONTREAL

65

—Are the ashes sifted?
—Unless you sell coal you should sell
Cutts' All Metal Ash Sifter.
—Wire and metal.
—Can't come apart.

66

—Sells (retail) for 25c.
—Beats wood all to pieces.
—Your order please.
—State quantity.

C. M. CUTTS & CO., SOLE MAKERS Toronto Junction, Ont.



Pedlar's "Perfect" Metal Lath

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.
24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.**

POINTS IN FAVOR OF OUR GOODS

are many

Ready Roofing, Sheathing and Black  Diamond Tarred Felts,
Building Papers, Fibre and Manilla Wrappings, etc.

Ask for our quotations—they will interest you.

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLIETTE, QUE.

ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET,

MONTREAL

CURRENT MARKET QUOTATIONS.

Jan. 6, 1905.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$32 00 \$33 00

TINPLATES.

Charcoal Plates—Bright.
A.L.S., equal to Bradley— Per box.
I.O. usual sizes..... \$6 50
I.X "..... 8 00
I.X X "..... 9 50
Famous, equal to Bradley—
I.O. 6 75
I.X "..... 8 25
I.X X "..... 9 75
Raven and Vulture Grades—
I.O. usual sizes..... 4 25
I.X "..... 5 00
I.X X "..... 5 75
I.X X X "..... 6 50

"Dominion Crown Best"—Double
Coated, Tisued. Per box.
I.O. 5 50
I.X "..... 6 50
I.X X "..... 7 50

Allaway's Best—Standard Quality.
I.O. 4 50
I.X "..... 5 50
I.X X "..... 6 50

Coke Plates—Bright.

Bessemer Steel.
I.O. usual size, 14x20 3 40
I.O. special sizes, base 3 70
20x28 7 50
Charcoal Plates—Terne
Dean or J. G. Grade—
I.O. 20x28, 112 sheets 7 50
I.X, Terne Tin 10 50
Charcoal Tin Boiler Plates.
Cookley Grade—
X X, 14x56, 50 sheet bxs. } 7 00
" 14x60, " }
" 14x65, " }

Tinned Sheets.

72x30 up to 24 gauge..... 7 25 7 50
" 26 7 75 8 00

IRON AND STEEL.

Common bar, per 100 lb. 1 75
Ridged 2 05
Horseshoe Iron 2 30
Hoop steel, 1 1/2 to 3-in. base 2 75
Sleigh shoe steel, 2 10
Tie steel 2 30 2 50
T. Firth & Son's tool steel—
Speedicut..... 0 60
Annealed speedicut..... 0 65
Self hardening..... 0 35
Best tool steel..... 0 12
Warranted..... 0 09
Best sheet steel..... 0 12
B. K. Morton & Co.—
"Alpha" high speed..... 0 65
" " annealed..... 0 70
" " J. Standard..... 0 50
" " B.C. 0 14
" " BC 0 09
Onas & Colver's tool steel..... 0 10
" " "Novo" 0 65
" " annealed..... 0 70

Wm. Jessop & Sons—
High speed..... 0 60
Standard..... 0 14
Chas. Leonard 0 09
Crucible Steel Co.
" Rex high speed steel..... 0 65 0 75
" Self Hardening..... 0 45 0 50

Crucible Special..... 0 17
" Silver steel..... 0 13
" Black Diamond..... 0 10
Sanderson's Crucible steel..... 0 09
" Superior 0 12 0 13

RABBIT METAL.

Syracuse Smelting Works:
Aluminum, genuine..... 0 45
Government, "..... 0 44
Tough, "..... 0 40
Hard, "..... 0 40
Dynamo..... 0 30
Special..... 0 22
Harmony..... 0 25
Car Box..... 0 20
Extra..... 0 15

The Canada Metal Co.:

Imperial, genuine..... 0 40
Metallic..... 0 30
Hercules..... 0 20
Star..... 0 15
No. 1..... 0 12
No. 2..... 0 10
No. 3..... 0 06
No. 4..... 0 05

BLACK SHEETS.

Montreal, Toronto
10 gauge..... 2 30 2 30
12 and 14 gauge..... 2 30 2 35
17 2 30 2 40
22 to 24 gauge..... 2 35 2 50
26 2 40 2 65
28 2 40 2 70

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary..... 2 50
All bright..... 4 00
Galvanized Canada Plates—

Ordinary. Dom. Crown.

18x24x52 4 25 4 35
" 60 4 50 4 60
20x28x80 8 50 8 70
" 94 9 00 9 20

GALVANIZED SHEETS. Queen's

Fleur-de-Lis, Gordon Crown, Comet Bell, Head
16 gauge..... 3 50 3 50 3 50 3 50
18 to 24 gauge..... 3 50 3 75 3 50 3 50
26 3 75 3 75 3 90 3 75
28 4 00 4 00 4 05 4 00
American brands, \$4.00 for 10 1/2 oz.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 5-16 " " " " 5 60
" 7-16 " " " " 4 45
" 9-16 " " " " 3 85
" 11-16 " " " " 3 70
" 13-16 " " " " 3 55
" 15-16 " " " " 3 45
" 17-16 " " " " 3 35
" 19-16 " " " " 3 25
" 21-16 " " " " 3 15
" 23-16 " " " " 3 05
" 25-16 " " " " 2 95
" 27-16 " " " " 2 85
" 29-16 " " " " 2 75
" 31-16 " " " " 2 65
" 33-16 " " " " 2 55
" 35-16 " " " " 2 45
" 37-16 " " " " 2 35
" 39-16 " " " " 2 25
" 41-16 " " " " 2 15
" 43-16 " " " " 2 05
" 45-16 " " " " 1 95
" 47-16 " " " " 1 85
" 49-16 " " " " 1 75
" 51-16 " " " " 1 65
" 53-16 " " " " 1 55
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" 57-16 " " " " 1 35
" 59-16 " " " " 1 25
" 61-16 " " " " 1 15
" 63-16 " " " " 1 05
" 65-16 " " " " 0 95
" 67-16 " " " " 0 85
" 69-16 " " " " 0 75
" 71-16 " " " " 0 65
" 73-16 " " " " 0 55
" 75-16 " " " " 0 45
" 77-16 " " " " 0 35
" 79-16 " " " " 0 25
" 81-16 " " " " 0 15
" 83-16 " " " " 0 05

HAFTER, KENNEL AND POST CHAINS, 40 to 40 and 5 per cent.

Cow ties 40 p.c.
Tie out chains 65 p.c.
Stall fixtures 35 p.c.
Trace chain 45 p.c.
Jack chain, iron, single and double, discount 35 p.c. [count 40 p.c.]
Jack chain, brass, single and double, discount 35 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots..... 15 50
Bars.....
Cut lengths, round, 1/2 to 1 in. 21 00 23 00
" round and square, 1 to 2 inches..... 21 23 00
Sheet.....
Plain, 16 oz., 14x48 and 14x60 20 00
Plain, 14 oz. 21 00
Tinned copper sheet..... 24 00
Planned..... 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 " " " " 0 21
" 50-lb. and above " " " " 0 20

BOILER AND T.K. PITTS.
Plain tinned..... 40 per cent. off list.
Spun.....

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4 0 23
Tubing, base, per lb. 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb. 6 25 6 50
Domestic " " " " 5 50 5 75

ZINC SHEET.

5-cwt. casks 7 00
Part casks 7 50

LEAD.

Imported Pig, per 100 lb. 3 60
Bar, per lb. 0 05
Sheets, 2 1/2 lb. sq. ft., by roll 0 06 1/2
Sheets, 3 to 6 lb. " " " " 0 06
NOTE.—Cut sheets 1c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's..... per lb. 0 10 1/2 0 11

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck, seal and ball, \$7.50. Discount, 15 p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax. Terms, 2 p.c. for cash in thirty days.

PLUMBING GOODS.

BATH TUBS.

Zinc 6 00
Copper, discount 20 per cent. off revised list.

WATER.

Standard Ideal Enameled.
5 1/2 ft. 2 1/2 in. rolled rim, 1st quality..... 21 25
5 1/2 " " " 1st " " " " 17 25
5 1/2 " " " 2nd " " " " 23 60
5 1/2 " " " 1st " " " " 19 00
5 1/2 " " " 2nd " " " " 18 40
5 " " " 1st " " " " 17 25
5 " " " 2nd " " " " 20 75
5 " " " 1st " " " " 17 25
5 " " " 2nd " " " " 8 90
Plate 116 D, lavatories 1st quality..... 7 50
" 116 D, " 2nd " " " " 5 70
" 118 D, " 1st " " " " 4 80
" 118 D, " 2nd " " " " 4 70
" 120 D, " 1st " " " " 5 60
" 120 D, " 2nd " " " " 4 60
" 122 D, " 1st " " " " 5 40
" 122 D, " 2nd " " " " 4 50
Sinks 18 x 30 in flat rim..... 2 50
CLOSETS. Net.
Fittings..... 1 00
Plain Simplex Syphon Jet 9 00
Emb. 9 50
Fittings..... 1 25
Low Down Elgin or Teutonic, plain..... 6 00
" emb. 6 50
Connection 1 25
Plain Richelieu 4 25
Emb. 4 50
Connections..... 1 25
Basins, P.O., 14-in. 0 63
Basins, oval, 17 x 14-in. 1 50
Basins, " 19 x 15-in. 2 00

IRON PIPE.

Black pipe— Per 100 feet.
1/2 inch 2 03
" " " " " " 2 14
" " " " " " 2 29
" " " " " " 2 87
" " " " " " 4 12
" " " " " " 5 62
" " " " " " 6 75
" " " " " " 9 00

Galvanized pipe—
1/2 inch 2 86
" " " " " " 2 96
" " " " " " 3 14
" " " " " " 4 02
" " " " " " 5 77
" " " " " " 7 87
" " " " " " 9 45
" " " " " " 12 60

Malleable Fittings—Canadian discount 20 per cent.; American discount 35 per cent.

Cast Iron Fittings—Standard bushings 65 per cent.; headers, 60; flanged unions, lipped, 60; malleable bushings, 57 1/2; nipples, up to 6 in., 70 and 5.

PLUMBERS' BRASS GOODS.

Standard Compression work, dia. 60 & 10 p.c. Cushion work, discount 50 per cent. Fuller work, discount 70 per cent. 6 dozen lots and over of the above, extra discount 10 per cent. Lever handle Stops and Waste, discount 60 per cent. With in lots of 2 dozen and over an extra discount of 10 per cent. J.M.T. Globe, Angle and Check Valves, discount 55 per cent. Standard Globe, Angle and Check Valves, discount 65 per cent. Kerr's special standard globes and angles discount 55 per cent.

Kerr's Jenkin disc, copper-alloy disc and heavy standard valves, discount 55 per cent. Kerr's standard brass checks, discount 55 p.c. Kerr's standard brass disc steam radiator valves, discount 65 per cent. Kerr's Jenkin disc, copper-alloy disc radiator valves, discount 65 per cent. Kerr's quick-opening hot-water radiator valves, discount 65 per cent. Weber's (Kerr) patent straightway gate valves, brass, discount 50 per cent. Weber's (Kerr) patent straightway gate valves, I.B.B.M., discount 60 and 10 per cent. J.M.T. Radiator Valves discount 55 per cent. Standard Radiator Valves, discount 65 per cent.

Patent Quick-Opening Valves, discount 70 per cent.

No. 1 compression bath cock..... net 1 75
No. 4 " 1 90
No. 7 Fuller's " 1 10
No. 4 1/2 " 2 25

Patent Compression Cushion, basin cock, hot and cold, per doz., \$31; 5 and 10 per cent. discount.

Patent Compression Cushion, bath cock, No. 2208 2 25
Square head brass cocks, discount 55 per cent. " iron " 50 to 60 " " Thompson Smoke-test Machine \$25.00

RANGE BOILERS.

Copper, 30 gallon..... 22 00
" 35 24 00
" 40 28 00
Discount off copper boilers 15 per cent.

GALVANIZED IRON RANGE BOILERS.

Capacity. Standard. Extra heavy
Gals.
12 4.50 6.50
18 4.75 6.75
24 4.75 6.75
30 5.00 7.50
35 6.00 8.50
40 7.00 9.50
52 11.00 14.00
66 18.00 20.00
82 21.00 24.00
100 29.00 34.00
120 34.00 40.00
144 47 00 55 00

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE CALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

SOIL PIPE AND FITTINGS.
Med. and Extra heavy pipe and fittings, dis. 60 per cent.
7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER. Per lb.
Bar, half-and-half, guaranteed 0 17½
Wiping..... 0 15½
Refined..... 0 16½

PAINTS AND OILS.

COLORS IN OIL

1-lb. tins, pure.

Venetian red, per lb. 0 08
Chrome yellow..... 0 15
Golden ochre..... 0 08
French..... 0 06
Marine black..... 0 04
Chrome green..... 0 10
French permanent green..... 0 13
Signwriters' black..... 0 15

WHITE LEAD.

Per 100 lb.
Pure..... 4 75
No. 1..... 4 50
No. 2..... 4 25
No. 3..... 3 87½
No. 4..... 3 50
Munro's Select Flake White..... 4 75
Elephant and Decorators' Pure Monarch..... 5 00
Decorators' Pure..... 4 75
Essex Genuine..... 4 25
Sterling Pure..... 5 00
Island City Pure..... 5 00
Ramsay's Pure Lead..... 4 75
Ramsay's Exterior..... 4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt \$4 25
Genuine, 100 lb. kegs, 4 75
No. 1, 560 lb. casks, per cwt 4 00
No. 1, 100 lb. kegs, per cwt 4 25

WHITE ZINC.

Extra Red Seal 0 06
French V. M..... 0 06½
Lehigh..... 0 06

DRY WHITE LEAD.

Pure, casks 4 25
Pure, kegs 4 50
No. 1, casks 4 00
No. 1, kegs 4 25

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon 1 20
Second qualities, per gallon 1 00
Barn (in bbls.) 0 60
The Sherwin-Williams paints 1 35
Canada Paint Co.'s pure 1 25
Toronto Lead & Color Co.'s pure 1 25
Sanderson Peary's pure 1 20
Standard Co.'s "New Era" 1 30
"Globe" barn 60
Francis-Frost Co.'s "Ark" B'd 1 25
British Navy deck 1 50
Henderson & Potts's "Anchor" 1 35
Ramsay's paints, Pure, per gal. 1 00
"Thistle, 1 00
"Outside, bbls 0 55
Island City House Paint 1 25
"Floor 1 25
Sterling House Paint 1 20
"Floor 1 10
National 1 05

PARIS GREEN.

BERGERS' ENGLISH.

Petroleum, barrels, per lb. 0 15½
Arsenic, kegs 0 15½
50 and 100-lb. drums 0 16
25-lb. drums 0 16½
1-lb. paper boxes 0 17
1-lb. tins 0 17
1-lb. paper boxes 0 19
1-lb. tins 0 20
Terms—2 per cent. off 30 days, or 90 days net.

PATTY.

Bulk in bbls..... 1 45
Bulk in less quantity 1 70
Bladders in kegs, boxes or loose..... 1 85
25-lb. tins..... 1 80
12½ lb. tins 2 05
Bladders in bulk or tins less than 100 lb. 1 85

VARNISHES.

In 5-gal. lots. Per gal. Net.
Carriage, No. 1 1 50
Pale durable body..... 4 10
"rubbing..... 2 85
Gold size, japan..... 1 50
No. 1 brown japan..... 0 85
Elastic oak 1 50
Furniture, extra..... 1 10
"No. 1..... 0 90
Hard oil finish..... 1 35
Light oil finish..... 1 60
Damar..... 1 75
Shellac, white..... 2 40
"orange..... 2 30
Turpentine, brown japan 1 10
"black japan..... 1 20
"No. 1..... 0 85
Elastilite varnish, 1 gal. can, each..... 2 00
Granite floor finish, per gal 2 75
Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each.
Sherwin-Williams' kopal varnish, assorted case, from 1 to 1 gal., \$2.50.

GLUE.

Common 0 08
French medal..... 0 10
White, extra..... 0 18
Gelatine..... 0 18
Strip..... 0 18
Coopers..... 0 19
Huttner..... 0 19
Grunder..... 0 12
Cologne, genuine..... 0 16

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent. American \$2.00 per 1000.
C. B. Caps American, \$2.60 per 1000.
Rim Fire Pistol, discount 30 p.c., American.
Rim Fire Cartridges, Dominion, 50 and 5 p.c. Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent., American.
Central Fire Pistol and Rifle, list net Amer.
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American 10 per cent. advance on list.
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount. American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.
Brass Shot Shells, 55 per cent.
Primers, Dom., 34 per cent.; American, \$1.75 per lb.

Best thick brown or grey felt wads, in ½-lb. bags \$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges 0 99
Best thick white card wads, in boxes of 500 each, 10 gauge 0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges 0 20
Thin card wads, in boxes of 1,000 each, 10 gauge 0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—Per M.
11 and smaller gauge 0 60
9 and 10 gauges 0 70
7 and 8 " 0 90
5 and 6 " 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge 1 15
9 and 10 gauges 1 40
7 and 8 " 1 85
5 and 6 " 1 90

ADZES.

Discount 20 per cent.
Wright's, 80-lb. and over..... 0 10½
Hay Budden, 80-lb. and over..... 0 09½
Brook's, 80-lb. and over..... 0 11½

APPLE PARERS.

Woodyatt Hudson, per doz., net 4 50
Gilmour's, discount 65 and 5 per cent. off list.

AUGERS.

Chopping Axes 7 00
Single bit, per doz. 10 00
Double bit, 18 00
Broad Axes, 25 per cent.
Hunters' Axes 5 50
Boys' Axes 6 25
Splitting Axes 7 00
Handled Axes 10 00

AMERICAN AXE AND TOOL CO.
Red Ridge, boys', handled, 5 75
"hunters..... 5 25
Underhill American Bench Axes, 40 p.c.

AXLE GREASE.

Ordinary, per gross 6 00
Best quality 10 00

BELLS.

Hand.
Brass, 60 per cent.
Nickel, 55 per cent.

Cow.
American make, discount 63½ per cent.
Canadian, discount 45 and 50 per cent.

Door.
Gongs, Sargent's 5 50
"Peterboro", discount 50 and 10 per cent. off new list.

Farm.
American, each 1 25
American, per lb. 0 35

House.
American, per lb. 0 40

BELTING.
Extra, 60 per cent.
Standard, 60 and 10 per cent.

No. 1, not wider than 6 in., 60, 10 and 10 per cent.
Agricultural, not wider than 4 in., 75 per cent.

Bits.
Auger.
Gilmour's, discount 60 per cent.
Rockford, discount 50 and 10 per cent.
Jennings' Gen., net list.

Car.
Gilmour's, 47½ per cent.
Expansive.

Clark's, 40 per cent.
Gimlet.

Clark's, per doz 0 65
Diamond, Shell, per doz. 1 00
Nail and Spike, per gross 2 25

BLIND AND RED STAPLES.
All sizes, per lb. 0 07½

BOLTS AND NUTS
Carriage Bolts, common (\$1 list) Per cent.
" 3-16 and ½ 60 and 10
" 5-16 and ¾ 55 and 5
" 7-16 and 1 55 and 5
" full sq. (\$2.40 list) 60
" Norway Iron (\$3 list) 60

Machine Bolts, all sizes, ¾ and less 60
Machine Bolts, 7-16 and up 60
Plough Bolts 55 and 5
Bolt Ends 55 and 5
Sleigh Shoe Bolts 70
Coach Screws, cone point 70
Nuts, square, all sizes, 4c. per lb. off.
Nuts, hexagon, all sizes, 4c. per lb. off.
Stove Rods, per lb., 5½ to 6c.

ROOT CALKS.
Small and medium, ball per M. 4 25
Small heel 4 50

BRIGHT WIRE GOODS.
Discount 62½ per cent.

BUTCHERS' CLEAVERS.
German per doz. 6 00
American 12 00
Bailey's per doz. 6 30

BUTCHER KNIVES.
Bailey's per doz. 6 30

BUILDING PAPER, ETC

Tarred Felt, per 100 lb. 1 85
Ready roofing, 2-ply, not under 45 lb. per roll 0 90
Ready roofing, 3-ply, not under 65 lb., per roll 1 15
Carpet Felt per ton 45 00
Heavy Straw Sheathing per ton 35 00
Dry Sheathing per roll, 400 sq. ft. 0 40
Tar 400 " 0 50
Tanned Fibre 400 " 0 55
O. K. & I. X. L. 400 " 0 65
Resin-sized 400 " 0 70
Oiled Sheathing 600 " 1 00
Oiled 400 " 0 70
Roof Coating, in barrels per gal. 0 17
Roof " small packages " 0 25
Refined Tar per barrel 5 00
Coal Tar 4 00
Coal Tar, less than barrels per gal. 0 15
Roofing Pitch per 100 lb. 1 00
Slater's felt per roll 0 60

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.9 or 2-inch.

BUTTS.

Wrought Brass, net revised list.
Cast Iron.
Loose Pin, discount 60 per cent.

WROUGHT STEEL.

Fast Joint, discount 70 to 70 and 5 per cent.
Loose Pin, discount 70 to 70 and 5 per cent.

CARPET STRETCHERS.

American per doz. 1 00
Bullard's 6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.
Plate, discount 52½ to 57½ per cent.

CATTLE LEADERS.

Nos. 32 and 33 per gross 7 50

CHALK.

Carpenters' Colored, per gross 0 45
White lump, per cwt. 0 60
Red 0 05
Crayon per gross 0 14

CHISELS.

Socket, Framing and Firmer.
Broad's, discount 60 and 10 per cent.
Warnock's, discount 50 and 10 per cent.
P. S. & W. Extra, discount 60 and 10 per cent.

FOODS—STOCK.

Colonial Stock Foods, 50c. packages, per doz \$4 00
" " " 25c. pkgs., " 2 00
" " " 10c. " 75
" " " 25-lb. pall, each 1 80
Poultry Foods, 25c. packages 1 25
Cough Powders, per doz. 1 25
Worm " " " 1 25

International Stock Foods, \$1 packages, per doz. 8 00
International Stock Foods, per pall 2 25
" " per bbl. 10 50
" Poultry " \$1 pkgs. per doz. 8 00
" Worm Powders, 50c. pkgs. 4 00
" Pine Healing Oil, per doz. 8 00
" Pheno-Chloro, \$1 pkgs., per doz 8 00
" Hoof Ointment 8 00
" Compound Absorbent 16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz

CLOTHES REELS.

Davis Clothes Reels, dis. 40 per cent

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.		
Plain or Corrugated.		
2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.		
Canadian, discount 20 to 25 per cent.		

CROSSCUT SAW HANDLES.		
S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.		
Torrey's Rod	per doz.	1 85
Coil, 9 to 11 in.	"	0 95 1 65
English	"	2 00 4 00

DRAW KNIVES.		
Coach and Wagon	discount 50 per cent.	
Carpenters	discount 60 and 10 per cent.	

DRILLS.		
Hand and Breast.		
Miller's Falls	per doz., net list.	

DRILL BITS.		
Morse	discount 37½ to 40 per cent.	
Standard	discount 50 and 5 to 55 per cent.	

FAUCETS.		
Common, cork-lined	discount 35 per cent.	

EAVETROUGHS.		
10-inch	per 100 ft.	10 00

ELBOWS (stovepipe.)		
5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35
Polished, 15c.	per dozen extra.	

ESCUTCHEONS.		
Discount 50 and 10 per cent., new list		

ESCUTCHEON PINS.		
Iron	discount 40 per cent.	

FACTORY MILK CANS.		
Discount off revised list	40 per cent.	

FILES AND RASPS.		
Great Western	70 and 10 per cent.	
Arcade	70 " 10 "	
Kearney & Foot	70 " 10 "	
Diamond	70 " 10 "	
American	70 " 10 "	
J. Barton Smith	70 " 10 "	
McClellan	70 " 10 "	
Eagle	70 " 10 "	
Nicholson	60 and 10 to 60, 10 and 5 "	
Royal	70 " 10 "	
Globe	70 to 75 "	
Black Diamond	60 and 10 to 60, 10 and 5 per cent.	
Jowitt's, English list	25 to 27½ per cent.	
Nicholson File Co.'s "Simplicity" file handle,	per gross 85c. to \$1.50	

GLASS.		
Window. Box Price.		
Size United	Per	D. Diamond
Inches.	50 ft.	50 ft. 100 ft.
Under 28	3 80	5 06
28 to 40	4 00	5 44
41 to 50	4 50	6 56
51 to 60	4 75	7 50
61 to 70	5 00	8 62
71 to 80	5 30	9 38
81 to 90		10 75
91 to 95		12 30
96 to 100		15 00
96 to 100		18 00

GAUGES.		
Marking, Mortise, Etc.		
Stanley's	discount 50 to 55 per cent.	
Wire Gauges.		
Winn's, Nos. 26 to 33	each	1 65 2 40
GILLET'S POWDERED LYE.		
1-case, \$3.70; 3-case, \$3.60; 5-case and over,		\$3.50.

HALTERS.		
Rope, 1-inch	per gross	3 00
Rope, 1 1/2	"	12 00
Rope, 1 to 1 1/2	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1 1/2	"	5 20
Web	"	2 45

HAMMERS.		
Nail.		
Maydole's	discount 5 to 10 per cent. Canadian	discount 25 to 27½ per cent.

TACK.		
Magnetic	per doz.	1 10 1 20

SLEDGE.		
Canadian	per lb.	0 07½ 0 08½

BALL PEEN.		
English and Canadian	per lb.	0 22 0 25

HANDLES.		
Axe, 2nd growth	per doz. net	3 00 4 00
Sore door	per doz.	1 00 1 50

FORK.		
C. & E., discount 40 per cent., revised list.		

HOE.		
C. & E., discount 40 per cent., revised list.		

SAW.		
American	per doz.	1 00 1 25

PLANE.		
American	per gross	3 15 3 75

HAMMER AND HATCHET.		
Canadian	discount 40 per cent.	

HANGERS.*		
doz. pairs.		
Steel barn door		8 00 10 00
Stearns, 4-inch		4 50
" 5-inch		6 00
Zenith		9 90

LANE'S COVERED—		
No. 11, 5-foot run		8 40
No. 11½, 10-foot run		10 80
No. 12, 10-foot run		12 60
No. 14, 15-foot run		21 00
Steel, covered	4 00	11 00
" track, 1 x 3-16 in (100 ft.)		3 75
" 1 1/2 x 3-16 in (100 ft.)		4 75

HARVEST TOOLS.		
Discount 60 per cent.		

HATCHETS.		
Canadian	discount 40 to 42½ per cent.	
Shingle, Red Ridge 1	per doz.	4 40
" 2	"	4 85
Barrel, Underhill		5 00

HAT ENAMEL.		
Henderson & Potts' "Anchor Brand"		

BINGES.		
Blind, Parker's	discount 60 per cent.	
Heavy T and strap, 4-in., per lb.		0 06½
" 5-in., "		0 06
" 6-in., "		0 05½
" 8-in., "		0 05
" 10-in., "		0 06½

Light T and strap, discount 65 and 5 per cent.		
Screw hook and hinge—		
6 to 10 in.	per 100 lb.	4 50
12 in. up.	"	3 25
Spring, No. 20, per gro. pairs		10 50
Spring, Woodyatt pattern, per gro.	No. 5,	
\$17.60; No. 10, \$18; No. 20, \$10.80; No.	120, \$20; No. 51, \$10; No. 50, \$27.50.	

GARDEN, MORTAR, ETC., discount 60 per cent.		
Planter	per doz.	4 00 4 50

HOLLOW WARE.		
Tinned case	35 per cent.	

HOOKS.		
Cast Iron.		
Bird cage	per doz.	0 50 1 10

Clothes line, No. 61	"	0 00 0 70
Harness	"	0 60 12 00
Hat and coat	per gro.	1 10 10 00
Chandelier	per doz.	0 50 1 00

Wrought Iron.		
Wrought hooks and staples	Canadian discount 60 per cent.	

Wire.		
Hat and coat	discount 60 per cent.	
Belt	per 1,000	0 60
Sorew, bright	discount 60 per cent.	

HORSE NAILS.		
"P.B." Brand	55 to 60 per cent.	
"C" brand	40, 10 and 7½ per cent. off list	
"M" brand	55, per cent.	
"Monarch"	50 and 7½ per cent.	
"Peerless"	50 per cent. dis.	

HORSESHOES.		
F.O.B. Montreal		
"P.B." brand, new pattern, base		\$3 50
"M" brand, base		3 85
Add 15c. Toronto, Hamilton, Guelph.		

JAPANNED WARE.		
50 per cent.		

PICKS.		
Star	per doz.	3 00 3 25

KETTLES.		
Brass spun 7½ per cent. discount off new list.		
Copper	per lb.	0 30 0 50
American	60 and 10 to 65 and 5 per cent.	

KEYS.		
Lock, Canadian dis.	40 to 40 and 10 per cent.	
Cabinet, trunk and padlock		
American	per gross	0 60

KNOBS.		
Door, japanned and N.P., per doz.		1 50 2 50
Bronze, Berlin	per doz.	2 75 3 25
Bronze, Genuine	"	6 00 9 00
Shutter, porcelain, F. & L.		
screw	per gross	1 30 2 00
White door knobs	per doz.	2 00

HAY KNIVES.		
Net prices.		

LAMP WICKS.		
Discount, 60 per cent.		

LADDERS, EXTENSION.		
Wagoner Extension Ladders	dis. 40 per cent.	

LANTERNS.		
Cold Blast	per doz.	7 00
No. 3, "Wright"	"	8 50
Ordinary, with O burner	"	4 00
Dashboard, cold blast	"	9 00
No. 0	"	5 75
Japanning, 50c. per doz. extra.		

LEMON SQUEEZERS.		
Porcelain lined	per doz.	2 20 5 60
Galvanized	"	1 87 3 85
King, wood	"	2 75 2 80
King, glass	"	4 00 4 50
All glass	"	0 50 0 90

LAWN MOWERS FOR 1905.		
Woodyatt, 10½-in., 14-in. cut	\$ 3 50 to \$11 00	
Star	9-in.	6 00 to 6 50
Daisy	8-in.	5 25 to 5 75
Philadelphia, 7½-in.	"	6 00 to 7 50
Woodyatt, 10½-in., ball bearing	13 25 to 18 00	
Grass Boxes	"	1 75 to 2 00
King Edw'd, 12-in., 14-in. cut	9 00 to 10 00	

Horse Lawn Mowers, "Special."		
Discount, 50 per cent., with freight concessions in quantity shipments.		

Maxwell & Sons:		
10½-in. high wheel		7 50 10 00
9-in.		5 50 6 25
8-in.		4 90 5 50
Discount 50 per cent.		

LOCK.		
Canadian	50 to 50 and 10 per cent	
Russell & Erwin	per doz.	

Cabinet.		
Eagle	discount 30 per cent.	

Padlocks.		
English and Am.	per doz.	0 50 6 00
Eagle	discount 20 to 25 per cent.	

MACHINE SCREWS.		
Iron and Brass.		
Flat head	discount 25 per cent.	
Round head	discount 20 per cent.	

MALLET.		
Tinsmiths'	per doz.	1 25 1 50
Carpenters', hickory	"	1 25 3 75
Lignum Vitae	"	3 85 5 00
Caulking, each	"	0 60 2 00

MATTOCKS.		
Canadian	per doz.	5 50 6 00

MEAT CUTTERS.		
American	discount 3½ per cent.	
German	15 per cen	
Gem	each	1 15

MILK CAN TRIMMING.		
Discount 25 per cent.		

NAILS.		
Cut. Wire.		
2d		3 30 3 25
3d		2 95 2 90
4 and 5d.		2 70 2 65
6 and 7d		2 60 2 55
8 and 9d		2 45 2 40
10 and 12d		2 40 2 35
16 and 20d.		2 35 2 30
30, 40, 50 and 60d (base)		2 30 2 25

Cut nails in carlots 5c. less.		
Wire nails in carlots	\$2.20 (base).	
Steel cut nails 10c. extra.		
Miscellaneous wire nails	discount 75 per cent.	
Coopers' nails	discount 30 per cent.	

NAIL FULLERS.		
German and American		1 75 2 50

NAIL SETS.		
Square, round and octagon,		
per gross.		3 38
Diamond		1 00

POULTRY NETTING.	
2-in. Mesh, 19 w.g., dia. 60 per cent.	
2-in. Mesh, 16 w.g. and heavier, 50 p.o.	



VERTICAL FILING SYSTEM.

START 1905 RIGHT—KEEP AT IT

and your Balance will be Satisfactory.

Nothing was ever accomplished in this world without system. The **MINT** couldn't make money without it. And how do you expect to succeed? When starting the business year of 1905 start with our Office Labor-Saving Devices for Correspondence and Record Filing. No danger of failure when your business is propelled by these. Ask any progressive business man. A card will bring a catalog.

We will be pleased to devise a System to meet your requirements.

THE OFFICE SPECIALTY MFG. CO., LIMITED

FACTORIES: NEWMARKET.

55 YONGE STREET, Toronto.

WATCH FOR OPENING OF OUR NEW BUILDING—97-101 Wellington St. W.,

PLANE IRONS.			SAP SPOUTS.			STAPLES.			ENAMELLED WARE.		
English	per doz.	2 00 5 00	Bronzed iron with hooks	per 1,000	7 50	Galvanized	3 00		White, Princess, Turquoise, Blue and White	discount 50 per cent.	
PLIERS AND NIPPERS.			"Eureka" tinned steel, hooks	"	8 00	Plain	2 80		Diamond, Famous, Premier, discount 50 and		
Button's genuine, per doz. pairs, discount			SAWS.			Coopers', discount 45 per cent.			10 per cent.		
37 1/2 to 40 per cent.			Hand, Diaston's, discount 12 1/2 per cent			Poultry netting staples, discount 40 per cent.			Granite or Pearl, Imperial, Crescent, discount		
Button's imitation, per doz.	5 00	9 00	S. & D., discount 40 per cent.			STOCKS AND DIES.			50, 10 and 10 per cent.		
German	0 60	0 60	Crosscut, Diaston's, per foot	0 35	0 55	American discount 25 per cent.			Premier steel ware, 40 per cent.		
PRESSED SPIKES.			S. & D., discount 35 per cent. on Nos. 2 and 3.			STONE.			"Star" decorated steel and decorated whit		
Discount 20 per cent.			Hack, complete, each	0 75	2 75				25 per cent.		
PULLEYS.			frame only, each	0 50	1 25						
Hothouse	per doz.	0 55 1 00	SASH WEIGHTS.								
Axle	"	0 22 0 33	Sectional, per 100 lb.	2 00	2 25						
Screw	"	0 27 1 00	Solid	1 50	1 75						
Awning	"	0 35 2 50	SASH COORD.								
PUMPS.			Per lb.	0 28	0 30						
Canadian cistern	1 80	3 60	SAW SETS.								
Canadian pitcher spout	1 40	2 10	Lincoln and Whiting	4 75							
PUNCHES.			Hand Sets, Perfect	4 00							
Saddler's	per doz.	1 00 1 85	X-Cut Sets,	7 50							
Conductor's	"	3 00 15 00	SCALES.								
Tinners', solid	per set	0 72	Gurney Standard, 40 per cent.								
hollow	per inch	1 00	Gurney Champion, 50 per cent.								
RAKES.			Burrow, Stewart & Milne—								
Wood	per doz. net	1 20 up.	Imperial Standard, discount 40 per cent.								
RAZORS.			Weight Beams, discount 35 per cent.								
Elliot's	4 00	18 00	Champion Stands, discount 50 per cent.								
Geo. Butler & Co. s.	4 00	18 00	Fairbanks standard, discount 35 per cent.								
Baker's	7 50	11 00	"Dominion, discount 55 per cent.								
"King Cutter	13 50	18 50	"Richelieu, discount 55 per cent.								
Wade & Butcher's	3 60	10 00	Warren's new Standard, discount 40 per cent.								
Carbo Magnetic	15 00		"Champion, discount 50 per cent.								
Griffon Barber's Favorite	10 75		"Weightbeams, discount 35 per cent.								
Griffon No. 65	13 00		SCREW DRIVERS.								
Griffon Safety Razors	13 50		Sargent's	per doz.	0 65 1 00						
Griffon Strapping Machines	13 50		SCREEN DOORS.								
Lewis Bros "Klean Kutter"	8 50	10 50	Common doors, 2 or 3 panel, walnut								
Hindoo	10 50	14 00	stained, 4-in. style	per doz.	6 50						
Orgatome's Swedish	3 50	10 00	Common doors, 2 or 3 panel, yellow and								
Henckel's	7 50	20 00	green stained, 4-in. style	per doz.	6 75						
Clauss, 50 and 10 per cent.			Common doors, 2 or 3 panel, in natural								
Clauss Straps, 50 and 10 per cent.			colors, oil finish	per doz.	8 75						
SCREWERS.			3-in. style 20c. per dozen less.								
Discount 40 per cent.			SCREWS.								
RIVETS AND BURNS.			Wood, F. H., bright and steel, discount 57 1/2								
Iron Rivets, black and tinned, 60 and 10 p. s.			per cent.								
Iron Burns, discount 55 per cent.			Wood, R. H., bright, dis. 82 1/2 per cent.								
Copper Rivets, with usual proportion burrs, 45			"R. H., brass, dis. 80 per cent.								
per cent.			"R. H., "dis. 75 per cent.								
Copper Burns only, discount 30 and 10 per cent.			"F. H., bronze, dis. 75 per cent.								
Extras on Tinned or Coppered Rivets, 1-lb.			"R. H., "dis. 70 per cent.								
packages 1c. per lb.; 1-lb. packages 2c. lb.			Drive Screws, dis. 87 1/2 per cent.								
RIVET SETS.			Bench, wood	per doz.	3 25 4 00						
Canadian, discount 35 to 37 1/2 per cent.			iron	"	4 25 5 00						
ROPE, ETC.			Set, case hardened, dis. 60 per cent.								
Sisal	0		Square Cap, dis. 50 and 5 per cent.								
Pure Manila	0 4		Hexagon Cap, dis. 45 per cent.								
"British" Manila	0 23		SCYTHES.								
Cotton, 3-16 inch and larger	0 21 0 23		Per doz. net	6 00	9 00						
"5-32 inch	0 25 0 27		SCYTHE SNATHS.								
"1 inch	0 25 0 28		Canadian, discount 40 per cent.								
Russa Deep Sea	0 16		SHOVELS AND SPADES.								
Jute	0 09		Canadian, discount 45 per cent.								
Lath Yarn, single	0 10		HINES.								
"double	0 10 1/2		Cast iron, 16 x 24	0 85							
Sisal bed cord, 48 feet	per doz.	0 65	"18 x 30	1 00							
"60 feet	"	0 80	"18 x 36	1 40							
"72 feet	"	0 95	SNAPS.								
RULES.			Harness, German, discount 25 per cent.								
Boxwood, discount 70 per cent.			Lock, Andrews	4 50	11 50						
Ivory, discount 20 to 25 per cent.			SOLDERING IRONS.								
SAD IRONS.			1, 1 1/2-lb.	per lb.	0 37						
Mrs. Potts, No. 55, polished, per set	0 80		2-lb. or over	"	0 34						
No. 50, nickel-plated, "0 90			SQUARES.								
Common, plain	4 50		Iron, No. 492	per doz.	1 80 2 35						
plated	5 50		"No. 493	"	2 40 2 55						
SAND AND EMERY PAPER.			"No. 494	"	3 25 3 40						
R. & A. sand, discount, 40 and 5 per cent.			Steel, discount 60 and 5 to 65 per cent.								
Emery, discount 40 per cent.			Try and Bevel, discount 50 to 52 1/2 per cent.								
Emery (Burton's), 5 to 10 per cent. advance			STAMPED WARE.								
on list			Plain, discount 75 and 12 1/2 per cent. off								
			revised list								
			Retinned, discount 75 per cent. off revised list								

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Art Glass

St. George, H. E., London, Ont.

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Waggoner Ladder Co., London, Ont.

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Metallic Roofing Co., Toronto.

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Shurly & Dietrich, Galt, Ont.

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Gurney Scale Co., Hamilton, Ont.

Merrick, Anderson & Co., Winnipeg.

New-Warren Scale Co., Montreal.

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United Factories, Toronto.

Screws, Nuts, Bolts.

Acme Lathe Products Co., Manchester, Eng.

Bayliss, Jones & Bayliss, Wolverhampton, Eng.

Canada Foundry Co., Toronto.

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Sewer Pipes.

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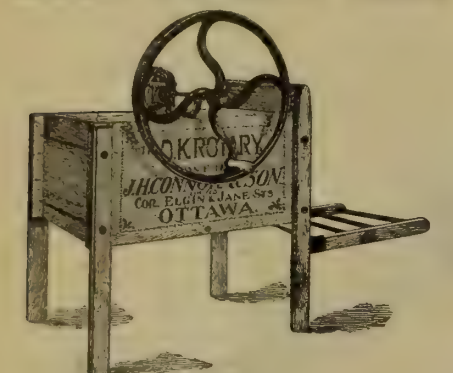
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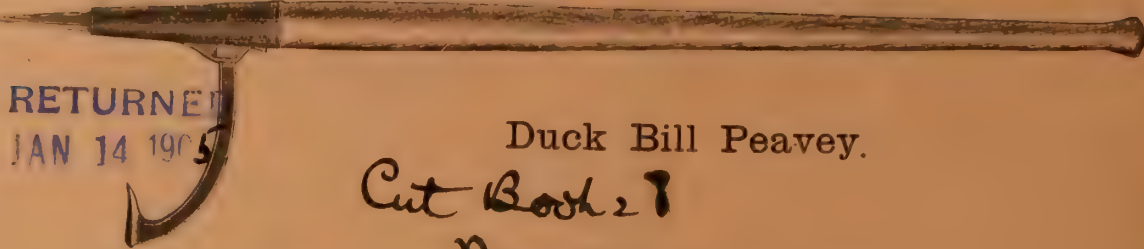
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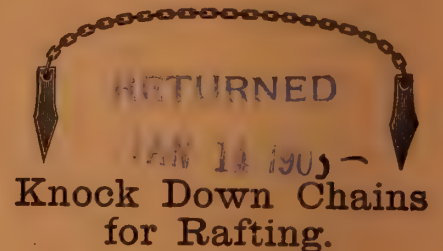
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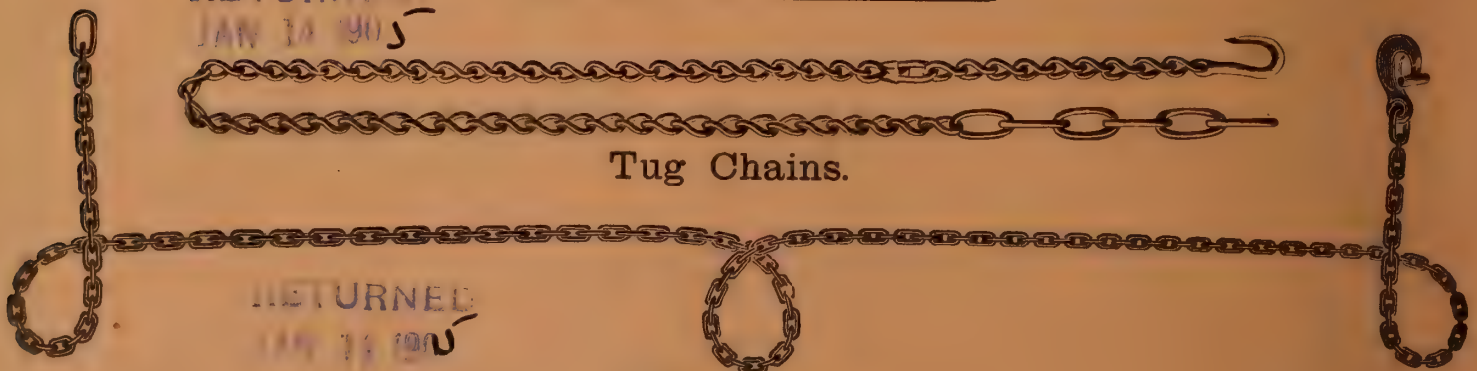
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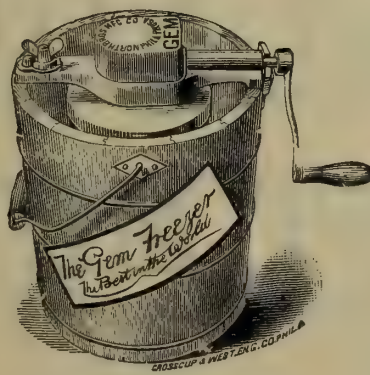
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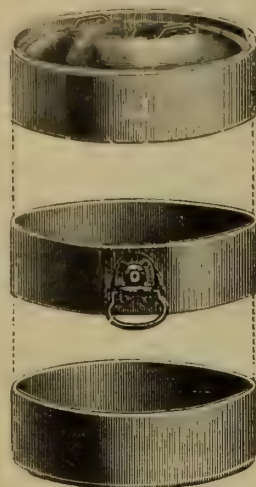
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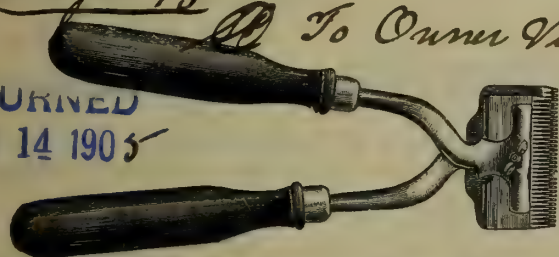
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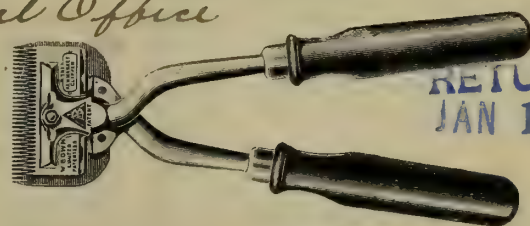
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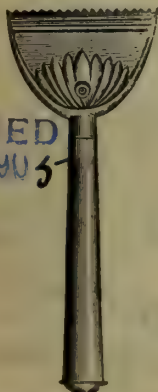


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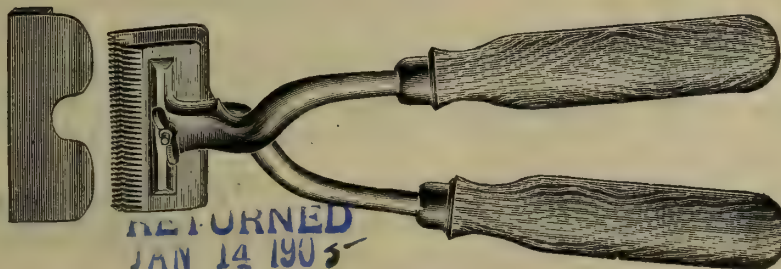


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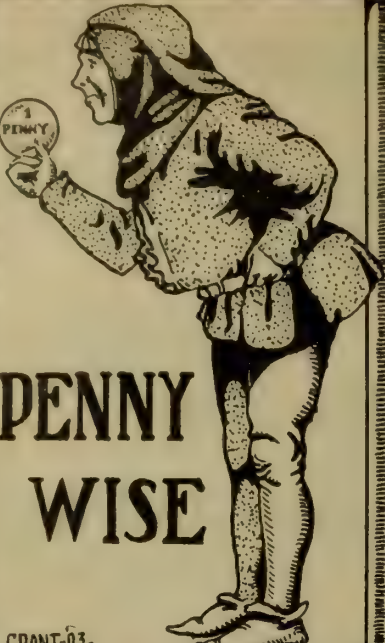


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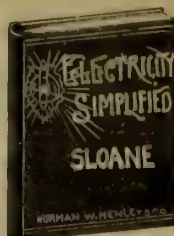
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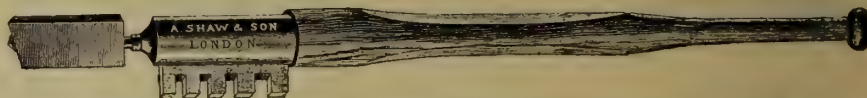
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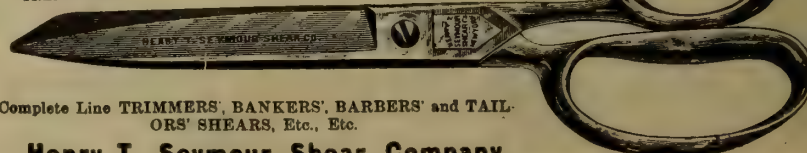
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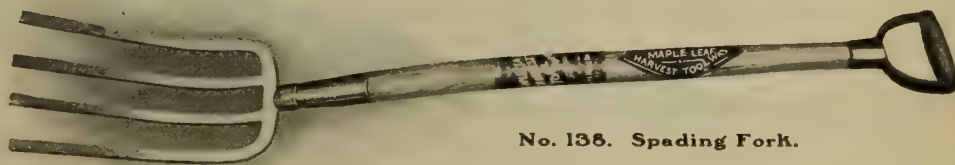
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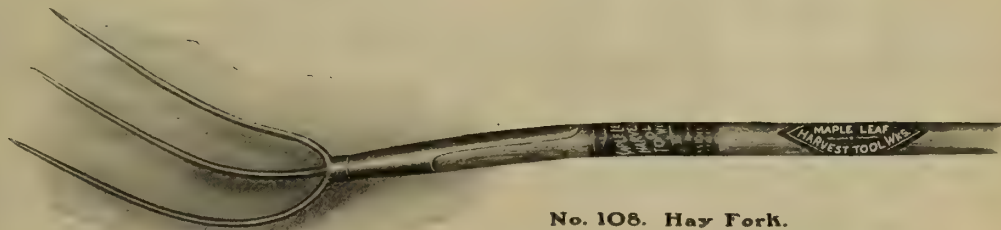
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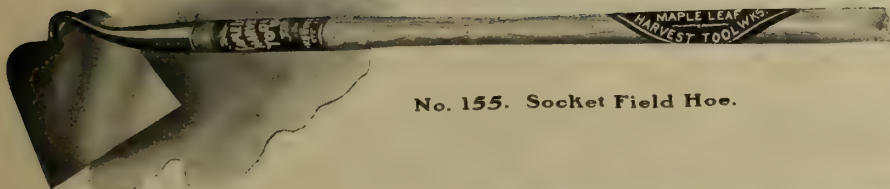
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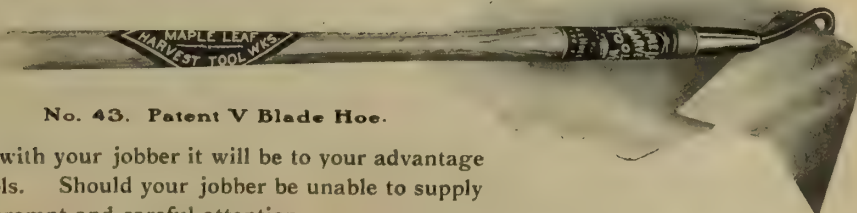
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We can certainly interest you
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Your Customers

the farmers are looking for a strong, serviceable and
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IDEAL



A GOOD SELLER

The IDEAL is made of No. 9 Hard Steel Galvanized
Wire throughout, and has many distinctive features which
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It pays dealers to handle fencing that gives best value
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and other Fence Wire unexcelled in quality, shipped
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The McGregor-Banwell Fence Co., Limited,
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Sole agents for Man. and N.W.T.



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"Maxwell Favorite Churn."

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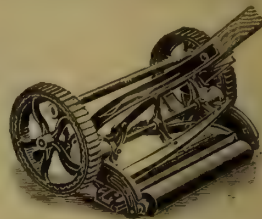
Improved Steel
Stand, Roller
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If your Wholesale House does not offer you these articles

SEND DIRECT TO US.



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Binder Twine

BLUE RIBBON, 650 ft. to the lb.

REDCAP, - 600 ft. to the lb.

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Still the Favorites of both FARMERS and DEALERS.

Nothing but Select Fibre Used.

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Our Twine is not only evenly spun, but is WELL BALLED.

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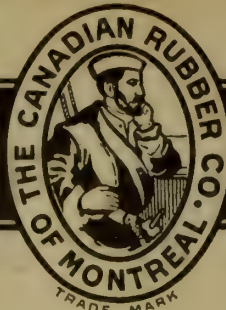
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"Red Star" Sheet Packing

"Red Star" is the original High-Grade Sheet Packing, a winner all the time.

Some of the other Packings are good Packings, but—

"Red Star" is without a Rival.

Write for a Free Sample.

Sales Branches and Warehouses:

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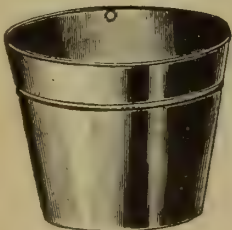
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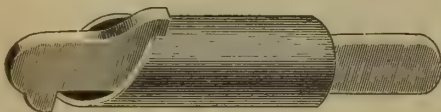
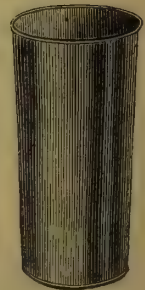
2 SIZES.

QUARTS 6 AND 10.

STRAIGHT PATTERN
SAP BUCKETS

3 SIZES.

NOS. 8, 12, 16.



E. T. PATTERN SAP
SPOUTS

Made from tinned steel.

WE CAN SUPPLY THE EUREKA
SAP SPOUT IF DESIRED.

TIN PLATES IN ALL STANDARD
SIZES AND QUALITIES.

WE WILL BE PLEASED TO
QUOTE YOU.



MAPLE LEAF SAP SPOUTS

Made from bronzed steel.

KEMP MANUFACTURING CO., TORONTO, CANADA

The Birmingham Chamber of Commerce and the Anti-Dumping Regulations

Specially written for Hardware and Metal.

LOOKING at the matter, as one of their number said, as far as possible from a Canadian point of view, the Birmingham Chamber of Commerce have approved unanimously the report of their Tariff Committee upon the new Canadian Customs regulations. Recognizing that the object of the new regulations was to preserve Canadian industries from the dumping of foreign produce, and was mainly directed against the United States, which, with its high protective tariffs and enormous home consumption, could often afford to sell its surplus at prices below the cost of production, the Tariff Committee were of opinion that the new Customs regulations would present many obstacles to trade between Canada and Great Britain which would seriously affect the Canadian importer on one hand, and the British exporter on the other.

The Customs Department at Ottawa, it was observed, had already endeavored to meet some of the difficulties, and it was evident that the Canadian Government desired that the dumping clause should operate with as little inconvenience as possible. But allowing for what they had done, it would by no means prevent the grave difficulties which were to be foreseen in the administration of the law. The amount of duty would depend on the decision of an appraiser in each case, and it would, therefore, be practically impossible in many instances for a purchaser in Canada to know what the laid-down cost of the goods would be to him until that decision of the appraiser had been given. The uncertainty involved by this regulation, it was thought by the committee, would seriously hamper trade. And it would be hardly possible to avoid discrepancies in the appraisement by various officers, and at various ports, so that the dumping clause might be put into operation in one case, whilst in another goods might escape the special duty to be imposed by the Customs to equalize the difference between what was considered fair market value, and the selling price. This would operate as an unintentional discrimination in favor of one importer, or exporter, against another, and introduce a further and most regrettable complication into business relations. It might be supposed, for example, that a consignment were sold to a Canadian purchaser f.o.b. Liverpool

for £94, but were on appraisement valued at £100. If the duty were 30 per cent. ad valorem, £30 would have to be paid instead of £28 5s 0d, the duty on £94, making total cost to the purchaser £124, instead of £122 5s 0d. Under the dumping clause, however, the difference between the selling price and the fair market value according to the appraisement would also be added, and the purchaser would, therefore, find the landed cost of his goods increased to £130, instead of £122 5s 0d. The administration of the regulations might, therefore, have serious consequences, and particularly with regard to articles manufactured in the Birmingham district to which no ordinary market price was assignable. The Act provided that in such cases the Canadian Minister of Customs "may" determine the value for duty of such goods; but the Tariff Committee failed to see that the necessity of referring to such adjudication could act otherwise than as a grave hindrance to business transactions. The home consumption of two manufacturers of an article might easily vary by more than 5 per cent., as they were determined by several considerations, such for instance, as the brand or trade mark, design, output, extent of sales in the home market, etc. Unless the Canadian Customs officials were more completely informed of conditions in the country of production than could reasonably be expected, the manufacturer of the lower-priced article might at any moment find in Canada his market value increased for duty purposes to the level of that of the higher-priced article made by his competitor, and that increase might be sufficient to bring him within the operation of the dumping clause. Probably on appeal some remedy might be possible for mistakes of that kind, but the risk and delay would tend very seriously to impede commercial intercourse.

One of the strongest objections to the new regulations was considered to be that merchants had too often no knowledge of home consumption values, and would find it exceedingly difficult, if not impossible, to certify the fair market values of the goods they shipped, without qualification. That would be particularly the case with large mixed consignments of goods which might have been purchased in large or small quantities

from so many as forty or fifty, or even more manufacturers. It was probable, too, that any qualification of the certificate of value might be the direct cause of an appraisement, which would increase the price by more than 5 per cent. The amount of the special duty under the dumping clause would be very serious, as it would run from 5 per cent. to at least 15 per cent. on the value of the goods, which might so increase the landed cost as to cause the importer to refuse to clear them. The dumping clause, it is further pointed out, would seriously affect Great Britain in competition with the United States in the Canadian markets. Contiguity and greater facilities of transportation gave the American shipper considerable advantage, and it was often absolutely necessary for British exporters to sacrifice some portion of their profits in order to sell their goods in the Dominion.

* * *

In order to secure amendments to meet these and other objections, it was suggested that the Colonial Secretary should be asked to communicate with the Canadian Government with a view to securing such facilities as would encourage legitimate trade between Canada and the United Kingdom. To some extent this might be done, it was thought, by increasing the permissible margin between the selling price and the fair "market value" to at least 10 per cent., and by requiring the production of certificates of value only in cases where the Customs authorities had reason to believe that goods were being dumped in the ordinary acceptance of the term.

* * *

Commenting upon certain points in the Tariff Committee's report, the Birmingham Daily Post—the great commercial paper of the Midlands—says, in regard to the question of the amount of duty to be paid being dependent upon the decision of the appraiser, the Canadian buyer would never know the "laid down cost" of an article. "Most people would probably say unhesitatingly, that the obvious remedy lies in painstaking and literal accuracy in making declarations, and that laxity in that direction deserves the penalty it will meet. According to the Chamber of Commerce, however, that is not nearly so simple." And it will come as a surprise, says the

Post, to all not actually engaged in business to learn that the export merchant often has no knowledge of the home consumption values, and would "find it exceedingly difficult, if not impossible, to certify the fair market value" of goods shipped. It seems somewhat of a strain upon credulity to be asked to believe that the British export merchant is so absorbed in other affairs as to be ignorant on such a point.

• • •

With regard to the question of transportation, the Post upholds the view of the Tariff Committee. It is a well-known fact, it continues, that in comprehensive dealings the cost of transport plays an important part, and not only in Canada, but in other markets where home exporters are in close competition with those of other nations enjoying the advantage of contiguity, it is often necessary for them to sacrifice profit to which they are legitimately entitled in order to be able to place their goods in foreign markets on equal terms. In other words, the cost of transit swallows up some part of the profit, and to make that a reason for bringing the dumping clause into operation would be to impose distinct hardship on the British merchants. "Obviously," is the conclusion, "the Canadian experiment is of absorbing interest to this country. Our manufacturers, during the last few years, have complained, as they never did before, of the disastrous effects of 'dumping,' and it may be assumed that the official policy of retaliation would include some attempt to cope with it. When and how retaliation could be most effectively used without causing injury to ourselves are the questions which have been advanced as objections by those who do not see their way to any departure from our existing fiscal system, and, that being so, it is exceptionally valuable to us to have the matter tackled and worked out experimentally. The experience of Canada ought to help us to solve some of our doubts."

A COMMERCIAL HOCKEY MATCH.

During the week great interest has been taken by the friends of two large commercial establishments in Montreal which have developed hockey teams,—the Allis-Chalmers-Bullock Co., and the American Tobacco Co., the latter's team being known as the Sweet Caporal. The teams lined up at the Stadium rink. The features of the game were the work of Johnson of the Allis-Chalmers-Bullock Co., and Edwards of the Sweet Caporal. A few minutes before time was up Sweet Caporal tied the score, and at the last moment Allis-Chalmers-Bullock won the deciding goal and the match by 3 to 2.

BUSINESS MEN IN PARLIAMENT

Daniel Gallery, M.P., St. Anne's, Montreal.

FOR the second time Ald. Daniel Gallery of Montreal has successfully contested St. Anne's electoral district, winning by a majority of 794. The member comes of good Irish stock and can trace his family history back into the dim and remote past. But he does not parade this fact before the public, preferring rather to base his claims on his record as a business man and citizen of Canada's metropolis.

Ald. Gallery owns a large tailoring business and was also at one time closely identified with a bakery business con-



Ald. Daniel Gallery, M.P.

ducted under the firm name of Gallery Bros. He has been entirely successful in his career as a business man, just as he has been in politics.

Politics have always interested him as well as politics of the proper sort. He has not gone in for being an alderman and an M.P. for what he can get out of it, but he has been prompted by the best motives. Consider some of his work as one of Montreal's city fathers. The Gallery baths in St. Anne's ward have been in inestimable boon to the poor people of that district and were provided through his persistent efforts. The paving of Mill street, the mud hole on which so many of the city's biggest factories opened, was the work of Ald. Gallery and a work much appreciated by the wealthy. So that Mr. Gallery's municipal politics have been of great advantage to both rich and poor.

In the wider sphere of Dominion politics, Mr. Gallery has shown the same breadth of view that distinguishes him as an alderman. He has served his constituency and his country well at Ottawa, a fact attested to by the defeat he inflicted on so strong an opponent as J. F. Quinn, one of Montreal's ablest Irish lawyers and politicians.

A DRUMMER M.D.

A CERTAIN metal traveler, on arriving home one Saturday morning and learning that a lady friend was sick, decided to telephone and ascertain if the lady were seriously ill. A domestic answered the phone, of whom he asked several questions. One of the ladies of the house passing the telephone, and judging from the answers that the doctor was enquiring after the patient's health, came to the telephone. The following conversation ensued:

"Is that you, Dr. H—?"

"Yes, Miss L—."

"Oh, I am so glad. N— is very sick, and I would like you to come and see her."

"I am very sorry, but my office is simply crowded with patients, and it is impossible for me to get away. If you will tell me some of the symptoms, perhaps I can prescribe for her."

"Well, she is restless and feverish, and did not sleep a wink last night."

"I understand. You might please take down this prescription."

"Just wait a minute and I will take it down."

"Manganese 1.420."

"What is that?"

"Manganese 1.420."

"All right."

"Silicon 1.850."

This had to be repeated and it was explained that the silicon was to give fluidity to the dose.

"Sulphur—a trace, phosphorus .050, combined carbon .450, Graphitic carbon 3.30, iron 92.845."

After considerable trouble and repetition the prescription was finally taken

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited.
HAMILTON, ONT.

down, and the "Drummer" M.D. wound up by saying: "Be sure you get the 'Jarrow' brand."

It would have been interesting a few minutes later when the prescription was handed to him to have seen the expression on the druggist's face when he was asked to compound a well-known brand of British Foundry Pig Iron.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Pumping Machinery.

THE catalogue of Hervey R. Worthington, New York, on pumping machinery, is a very handsome and comprehensive one. It is of standard catalogue size, and contains 131 pages. It is very handsomely illustrated, with engravings, and line cuts. Besides descriptions of the pumps, it contains much valuable information of a general character.

Among the pumps illustrated and described, are: steam pumps, compound and simple, including boiler feed pumps, plunger and ring pattern pumps, piston pumps, compound piston pumps for water-works service, fire pumps, low pressure pumps, pressure pumps, mine pumps, water-works pumping engines, mine pumps, air circulating pumps, vacuum pumps, water motor pumps, beer-racking pumps, pumps of centrifugal style driven by electric motor and also by steam turbine. In the catalogue are also illustrated and described the Worthington condenser equipment, feed-water heaters, and also meters of several kinds.

Electric Car Trucks.

The Railway Department of the Canada Foundry Company Ltd., Toronto, have issued bulletin No. 25, descriptive of trucks for motor cars. These trucks are Curtiss trucks, the Canada Foundry having recently acquired the sole right to manufacture and sell them in Canada. It is an eight page bulletin, and contains illustrations and descriptions of five types of trucks, besides a full page illustration of a single truck equipment being made by the Canada General Electric Co.

Air Compressors.

The Ingersoll-Sergeant Drill Co., 26 Cortlandt street, New York, have just issued a very handsome catalogue on

air compressing machinery. It is 10x7 inches and contains 97 pages. This catalogue constitutes the advance sheet of catalogue No. 36, which will contain further information and many illustrations of prominent installations. This advance sheet catalogue is very handsomely illustrated with full page illustrations of the many types of compressors made by this firm. There is also contained a reprint article from "Compressed Air" magazine, on Compressed Air.

The S. W. P.

The S. W. P., the monthly published by the Sherwin-Williams Company, in the interest of their agents, for January, 1905, has an attractively designed cover on which appears: "New Year, New Friends, New Business." One of the articles this month is entitled "The Time to Plan," which contains valuable suggestions to paint dealers. An-



Getting a Good Grip

There is only one way to get a good strong grip on the varnish business in your locality. That way is to sell *only* varnishes of *best quality*.

The Sherwin-Williams Varnishes are best quality in every respect. Well made, well aged, well tested and finally well advertised. This combination of good quality and good advertising will give any dealer a never-let-go grip on the varnish trade of his vicinity.

If you are not already selling Sherwin-Williams Varnishes write to-day for prices and full particulars of our proposition.

 **THE SHERWIN-WILLIAMS CO.**
 Canadian Headquarters and Plant: 639 Centre St., Montreal
 Warehouses: 86 York St., Toronto; 147 Bannatyne St., East, Winnipeg, Man. 1327

other very interesting article is called "Original Window Displays," in which are illustrated and described some very suggestive window displays, advertising this firm's paints. Several other interesting articles are contained in the issue.

A Beautiful Folder.

A neat little folder called "A Good Eye Opener," has been issued by the Frictionless Metal Co., Richmond, Va. It is highly colored, and every reader of **Hardware and Metal** would do well to possess one of these booklets, as the information given is very valuable to users or to any person connected in any way with machinery.

Practical Calendar.

The J. C. McLaren Belting Co. have issued a very practical calendar. It is small in size and the figures of the months are very plain and bold, while

the brass rivets which hold the list of months to the card serve as an indicator to the trade-mark of this company's time-proven belting. The J. C. McLaren Co. do not do things by halves and their excellent reputation is well maintained in the comparatively small detail of a first-class calendar.

Sportsman Calendar.

Iver Johnson's Arms and Cycle Works, Fitchburg, Mass., have once more issued their annual calendar. The coloring and design gives it a very effective appearance. The subject represents a wall on the inside of a hunter's cabin. The wall is of wood and hanging on it is a hunter's corduroy hunting jacket, a brace of revolvers, and an old strap,—doubtless used as a belt. The calendar will be given away free upon request to readers of Hardware and Metal.

Calendar of Tin.

A combination calendar and office file, manufactured of tin, is being given away this week by the Thos. Davidson Mfg. Co., Montreal. The subject of the calendar is the head and shoulders of an Indian arrayed in his war costume and paints. It is highly colored, setting off every feature to good advantage. On the back are the names of the brands of their manufactured tin and galvanized-ware. Any merchant, not already possessing one of these calendars, would do well to send for one.

A MATCH HOLDER.

A present for which Hardware and Metal expresses its best thanks is a handy match holder, which has been received from Sheppard & Elliott, dealers in hardware, stoves, tin-ware and household furnishings, Fernie, B. C. There are two varnished wooden match holders attached by bright strips of tin to a strong cardboard back. A strike is fastened below the holders. The gift is a simple one, but quite neatly worked out, and the gift of Sheppard & Elliott is much appreciated.

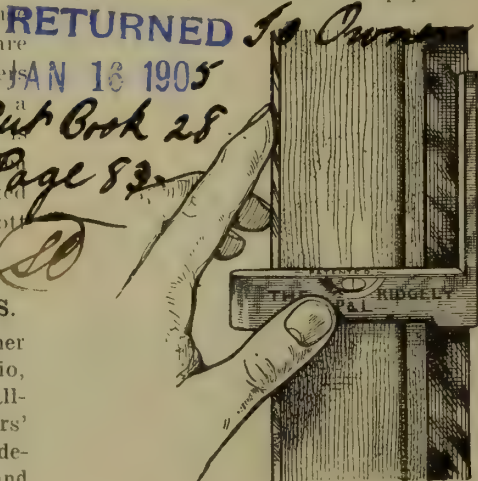
RIDGELY'S PLUMB AND LEVELS.

LAST year the Ridgely Trimmer Company, of Springfield, Ohio, manufacturers of the Ridgely wall-paper trimmer and other paper hangers' supplies, put out an ingenious little device known as Ridgely's Plumb and Level, and the enthusiasm with which it has been received by paper hangers in all parts of the United States, Canada and the foreign countries, has surprised even the manufacturers themselves, and dealers everywhere have found it a ready seller and in great demand.

This plumb and level fits any straight-

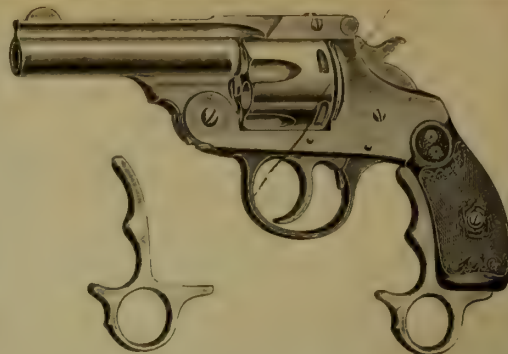
edge. It is guaranteed to be perfectly accurate and will give a plumb or level instantly at any place from floor to ceiling.

There is no firm in the country more anxious to please their patrons and gratify every wish possible than the Ridgely Trimmer Company, and in order to meet the wants of those paper-hang-



ers who prefer to have a plumb and level sunk in the straightedge they have put out this year a graduating level, which not only gives a plumb and level, but any graduation desired. The inner bushing holding the bubble can be easily turned to any graduation and always remains where placed. The two outer bands form a friction clutch for the

HAS A "GRIP" ON THE TRADE. IVER JOHNSON Revolver Grip.



Progressive dealers instantly recognized its value—the demand was spontaneous. As the result of extensive advertising there is already a large demand for this revolver.

Have you placed your order?

"DON'T CARRY IT" — "WILL SEND AND GET IT" —

"INTEND TO HAVE IT"



New York Office:
No. 99 Chambers St.

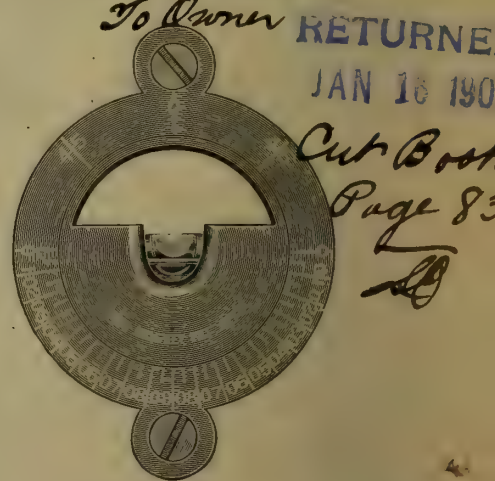
are signs that —————> point to the door of your competitor, who, being alert and keen, realizes that "New Things" impart life and activity to his business and who instantly recognizes the practicability and selling virtues of the

IVER JOHNSON Revolver Grip

Send for new catalogue just issued — a work of art — mailed free upon application

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS., U.S.A.

bubble bushing, and at the same time hold the level firmly in the edge by means of the two screws. The entire tool is sunk in the straightedge, leaving a smooth surface, and can be used from either side. This plumb and level is indispensable in panel or relief work, and can be sunk in any straightedge by any boy who has a thimbleful of brains.



No paper-hanger's kit is complete without one of these plumb and levels, and every first-class dealer should be able to supply the demand.

The Ridgely Trimmer Co. offer special inducements to the hardware dealers. Every hardware dealer should find some sale for these goods. Full information will be sent to any person interested.

H. S. HOWLAND, SONS & CO. LIMITED

HARDWARE MERCHANTS

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Wholesale only

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Heavy Malleable Ferrules Steel Hooks.

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Heavy, Round and Oval Whiffletrees, Second Growth Ash.

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Heavy, Team, Turned Neck Yoke.

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Malleable Ferrules, Steel Hook.

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*End Book #28
Page 71
To Owner.*



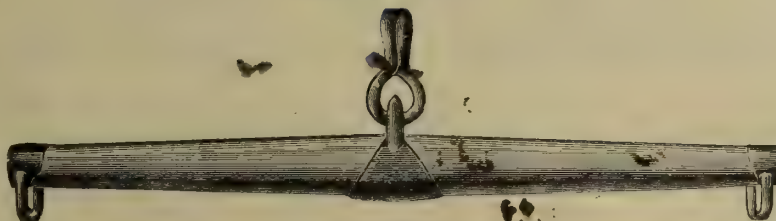
Grab Hook.

RETURNED
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Ironed Plough and Wagon Singletrees.

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Malleable Ferrules Steel Ring.

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Welded Centre Clip and Ring.

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Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

We Ship Promptly



The Standard Ideal Sanitary Co. Limited

MANUFACTURERS OF

Porcelain Enamel Bath Tubs Lavatories Sinks Slop Hoppers

"MADE IN CANADA."

Porcelain Enamel Bath Tubs,

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THE ONLY MANUFACTURERS OF ENAMELLED WARE IN CANADA

Head Office and Factory:

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Sales Office:

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Start the New Year Right

by placing an early order for our line of Gas and Electric Light Chandeliers.

This line is one of the best trade producers in the Dominion. It contains everything that the people want, and although it sells at equitable prices, it offers a fine profit.

Our line of bathroom specialties deserves your immediate investigation because it is made up of specialties which are in continual demand, which are thoroughly dependable, which satisfy the customer and which offer a large margin of profit to the dealer.

Write for information on Valves, Steam Specialties, Brass Work, Plumbing Supplies, etc.

The James Morrison Brass Mfg. Co., Limited

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THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill street,
Montreal, Jan. 13, 1905.

INTEREST is increased in the plumbing trade during the week, and very marked activity has been noticed everywhere. The advance in copper noted last week has been maintained, in fact, the probabilities are that cop-

per will be much higher. The expected advance on brass did not take place, but the market is very strong. With brass and copper holding high, the probabilities all point to a most extensive outlook for building in the immediate future. Large numbers of new buildings are in the course of construction in Montreal, and these naturally contribute to the interest of high prices in brass and copper. Large contractors maintain that brass may become lower in price, but information from abroad, and from the countries of production would dissipate the truth of this belief. Plumbing fixtures, and in fact all accessories to heating, etc., seem to be advancing. Local prices remain unchanged.

Range Boilers—The demand is increasing for these articles and some large orders have been placed during the week. Prices are unchanged. Prices are as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—The market is strong and the advance reported last week has kept its place. We quote as follows: Discount 30 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

Soil Pipe and Fittings—There has been a steady demand for these goods and considerable business has been carried on without any variation in prices. We quote: Soil pipe, standard, 50 per cent. and 10 per cent. off list; standard fittings, 50 per cent. and 10 and 10 per cent. off list; medium and extra heavy soil pipe, 60 per cent. off; fittings, 60 and 10 per cent. off.

Iron Pipe Fittings—A large business has been carried on, and the market is strong even though prices are normal and unchanged. We quote: Discounts on all sizes of nipples up to 6 inch, 67 1-2 to 70 per cent.

Iron Pipe—Not the slightest change has taken place, but there is a strong demand everywhere. Our quotations are as follows: Standard pipe, per 100 feet in length under 19 feet. Black, 1-8 inch, \$2.30; 1-4 inch, \$2.30; 3-8 inch, \$2.55; 1-2 inch, \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1-1-4 in., \$7.35; 1-1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.30; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1-1-4 in., \$10.05; 1-1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet

as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1-1-4 in., \$10.55; 1-1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1-1-4 in., \$13.25; 1-1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent., discount, and 1-2 to 6 in., 70 per cent. discount.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Jan. 13, 1905.

A fair amount of orders are arriving, which indicates that trade is once more rallying from the slackness caused by the holiday season. Stock orders have been received from merchants in the vicinity of Lake Superior. Despite the detrimental weather, plumbers and steam-fitters have not discontinued operations, and contract orders have been received by all the jobbing houses during the last week. The cold weather has stimulated the repair work, and such articles as solder and lead pipe have had a better demand. A re-adjustment of the price list is expected shortly. Some jobbers claim there will be a decline on the majority of articles, while others are strong in their opinions that all prices will advance. An advance seems most probable owing to the high price of raw material, and the increase in the demand, which is bound to take place before any great length of time.

Lead Pipe—Trade conditions continue unchanged. Demand is better, and prices continue unchanged. We quote: Lead, 7c; lead waste pipe, 8c; discount 30 per cent.

Soil Pipe and Fittings—Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—A fair demand is current. Prices are unsteady, and a change is reported. We quote nominally: Malleable fittings 20 per cent. for American and 35 per cent. for Canadian; cast iron (standard), bushings, 70 per cent.; headers, 60 per cent.; flanged and lipped unions, 60 per cent.; malleable bushings, 57 1-2 per cent.; nipples up to 6 inch inclusive, 70 and 5 per cent.

Copper Range Boilers—Trade is quiet. The discount continues unchanged at 15 per cent.

Galvanized Iron Range Boilers—Trade is better. Prices continue unchanged. Our quotations are: 12 gallon capacity, standard, \$4.50; extra heavy, \$6.50; 18 gallon, standard, \$4.75;

extra heavy, \$6.75; 24 gallons, standard, \$4.75; extra heavy, \$6.75; 30 gallons, standard, \$5; extra heavy, 7.50; 35 gallons, standard, \$6; extra heavy, \$8.50; 40 gallons, standard, \$7; extra heavy, \$9.50; 52 gallons, standard, \$11; extra heavy, \$14; 66 gallons, standard, \$18; extra heavy, \$20; 82 gallons, standard, \$21; extra heavy, \$24; 100 gallons, standard, \$29; extra heavy, \$34; 120 gallons, standard, \$34; extra heavy, \$40; 144 gallons, standard, \$47; extra heavy, \$55.

Iron Pipe—A better demand is noted on this week's market. The market is steady. Prices continue unchanged. Our quotations are: Black, 1-4 inch, \$2.04; 3-8 inch, \$2.06; 1-2 inch, \$2.30; 3-4 inch, \$2.88; 1 inch, \$4.13; 1 1/4 inch, \$5.63; 1 1/2 inch, \$6.75; 2 inch, \$9. Galvanized, 1-4 inch, \$2.86; 3-8 inch, \$2.89; 1-2 inch, \$3.15; 3-4 inch, \$4.03; 1 inch, \$5.78; 1 1/4 inch, \$7.88; 1 1/2 inch, \$9.45; 2 inch \$12.60.

Solder—A better trade is noted. Prices are firm, although no advance is anticipated. We quote: Bar solder half and half, guaranteed, is quoted at 17 3-4c; wiping solder at 15 1-2c, and refined 16 1-4c.

Enamelled Ware—The following quotations on Standard Ideal enamelled ware are given: Baths, rolled rim 51-2 feet, 2 1-2 in. rim, A quality, \$21.25; B quality, \$17.25; 3 in. rim, A quality, \$23.60; B quality, \$19; 5 feet, 2 1-2 in. rim, A quality, \$18.40; B quality, \$17.25; 3 in. rim, A quality, \$20.75; B quality, \$17.25. Lavatories, plate 116D, A quality, \$8.90; B quality, \$7.50; 118D, A quality, \$5.70; B, \$4.80; 120D, A quality, \$5.60; B quality, \$4.70; 122D, A quality, \$5.20; B quality, \$4.50. Sinks, 18x30 in., flat rim, \$2.50.

Ventilating Plumbing System.

AT a recent social meeting of the Toronto Master Plumbers' Association and the supply men, there was a debate on the subject, "Resolved that the main intersecting trap is necessary to a house plumbing system," in the discussion of which the subject of proper ventilation came up prominently. In view of this, the following article published in a recent issue of the Metal Worker should prove of value:

For a number of years the plumbing trade has been in a large measure satisfied that the method of ventilating plumbing systems has been nearly perfect. A special ventilation pipe has been used, running parallel with the vertical waste pipes connecting with these pipes near the bottom, then continuing up through the roof of the building. This vent pipe is placed beside the waste stack, although, in some instances the waste stack has been enlarged one size just before passing through the roof and the vent stack has been connected with it below the roof. Every fixture connected with the waste stack has been trapped to prevent the entrance of air from the sewer, and to protect

the water seal of the trap from siphonage or back pressure, both of which causes destroy the water seal, a ventilation pipe has been carried from the crown of the trap to the main ventilating pipe.

This ventilating system has the merit of securing a current of air through the various pipes in the building and by dilution in no small measure nullified the corrosive effect due to the decomposition of the matter in the pipes. This of itself has been considered by the plumber an important advantage.

Notwithstanding that in the best work vent pipes have been connected with the traps of all the fixtures, conditions arise which result in the breaking of the trap seals even in such a plumbing system. This is sometimes due to winds of high velocity on the outside of the building, and at other times to the discharge of some fixture high up in the building, which compresses the air in the waste stack below it and forces the water out of the trap seals below the downward plunge of the plug of water. At other times, by the swift downward course of the water, a tendency toward vacuum is produced which has the effect of breaking the trap seals before air can enter from the top of the building through the waste or vent pipes to preserve the equilibrium.

Scientists and bacteriologists who are students of the plumbing problem have arrived at the conclusion that the air from the sewer is so moist that the germs which the house drainage pipes might contain are not readily spread as the result of currents of air through them. Consequently, the necessity of absolutely preventing any of the sewer air from entering the building is practically nil, or at least is of so much less importance than it was formerly considered that they are almost willing to dismiss it without further consideration. They are of the opinion that plumbing systems can be materially cheapened, so that many buildings can be equipped with additional plumbing fixtures at the cost of the present plumbing equipment, by the omission of the vent pipes. They are positively of the opinion that a nonsiphonable trap will protect the health of the occupants of the building as fully as the elaborate system now in use.

Considerable attention has been given to this subject by architects in the vicinity of Boston, and as the result of their experiments, demonstrations and conclusions some important changes are expected to be made in the plumbing regulations of the city of Boston. It is quite possible also that the Massachusetts State plumbing law will be revised in accordance with the recommendations of these scientists. This is of

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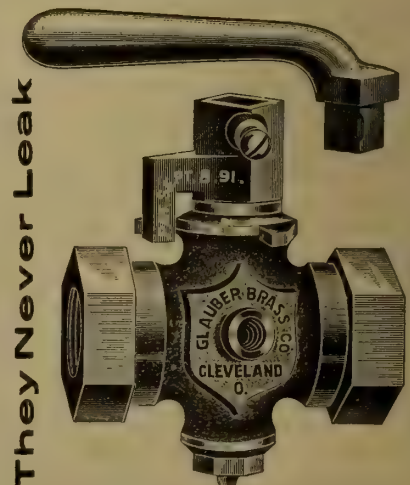
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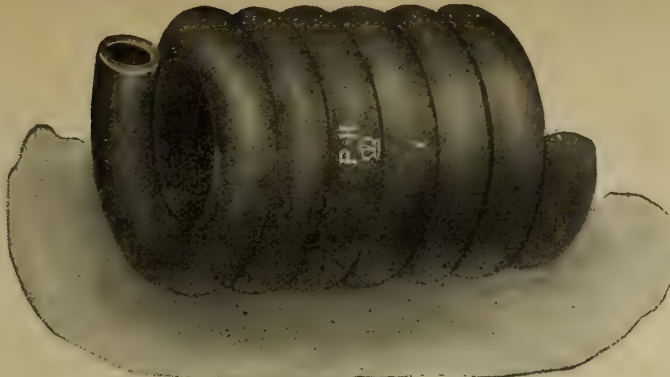
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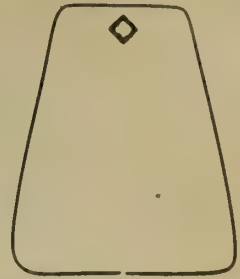
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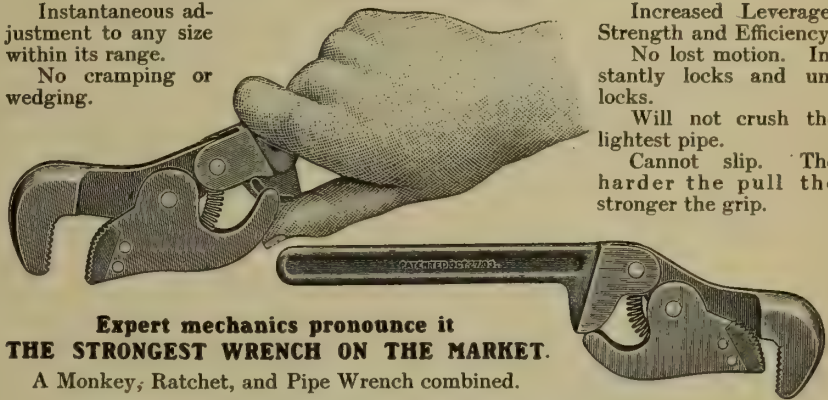
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interest to the whole plumbing trade, and doubtless the new law and regulations that may be enacted in Massachusetts, as well as the information which leads up to them, will be carefully studied by plumbers throughout the country.

The Utilization of Waste Warm Water.

IN a recent issue of the Gas Engine, Albert Strittmatter discusses the ways in which the water used to keep at a constant temperature the cylinders of gasoline, gas and other internal combustion engines, may be utilized for other purposes. This utilization of the waste water is of interest to the plumber in that he will get the piping to do. The enterprising plumber is ever on the lookout for ways in which to increase his business, and if he can make suggestions to power users or others whereby it is to their advantage to install some piping, etc., the more up-to-date plumber is he.

Among the different ways of utilizing this water suggested by Strittmatter are: for washing purposes; as feed water for low pressure boilers as used in low pressure steam heating systems; for hot water heating pipes where a high degree of heat is not required; for heating glue pots in pattern shops; and for various other uses where a medium quantity of hot or warm water is required.

Mr. Strittmatter says that many small machine shops are heated in a very satisfactory way by the use of this waste water.

The exhaust gases from the engine may also be utilized in heating service by passing the hot water pipes through the exhaust pot, or muffler, close to the engine. In such cases the pot, or muffler, must be of sufficient size to permit a free escape of the burned gases without excessive back pressure. In other words, if the usual exhaust pot is of the proper dimensions to permit of easy escape of the exhaust, the insertion of a number of hot water pipes might so reduce the cubical contents of the exhaust pot as to be equivalent to using too small a pot, resulting in back pressure and its accompanying difficulties.

One of the common uses of the exhaust gases in regions where low-grade liquid fuels, such as crude oil, are used is to pass the exhaust through the generator, and thereby furnish the necessary heat to assist in the vaporization of the fuel.

In some cases it has been found advantageous to use heated air, or warm air, in very cold weather, and at least one engine company has supplied a three-way valve whereby cold air, hot air, or both cold and hot air may be drawn in by the engine. The air is heated by having come in contact with

the exhaust pipe before reaching the valve.

There are numerous ways in which the heat usually wasted in the cooling water or the exhaust can be utilized. In fact, there is hardly a plant, where a gas or gasoline engine is in use, that does not require heat or hot water more or less of the time, and surely there is no excuse in such cases for not using what otherwise becomes a waste. By the advantageous use of the heat from the engine conveniences may often be devised as well as effecting a saving of money otherwise made necessary.

Boiler and Furnace Trade.

IN the latest issue of the Metal Worker is given a review of conditions of the boiler and radiator trade and of the furnace heating trade. The following extracts from these reviews will probably be of interest to Canadian plumbers:

From all indications, several important considerations will confront the steam and hot-water fitter during the year. With the advancing cost of materials and no reduction in the cost of production, there will probably be an advance made in the price of boilers, and these will be made before heating contractors file any bids for prospective work to be completed during the year. The radiator manufacturers are subject to the same advancing influences. The outlook promises that the heating contractors will be fully occupied, building reports predicting that there will be much building done throughout the year. The employment of cast iron boilers by steamfitters for larger class of work has notably increased within the past few years, so that now these boilers are used in many instances where, in former times, only the horizontal, return flue boiler of wrought iron construction would be used. There is thus a notable increase in the demand for cast iron boilers of from 25 to 50 horse power.

In touching on the hot-air furnace trade, the writer says:

"The popularity of the hot-air furnace as a means of domestic heating seems to increase, notwithstanding that it is the oldest of the central heating systems used in warming houses and that of late years it has been in competition with other systems possessing substantial advantages. Last Winter was extreme in its severity and of much longer duration than ordinary. Even under such a test the furnace system of heating buildings maintained its popularity, and when the year closed the records showed that the supply had by no means satisfied the demand. In point of numbers far too large a proportion of the furnaces used were not represen-

tatives of the best types of construction. The satisfactory results secured, however, even from this type of furnace when used in boiling operations, where everything is sacrificed in the interest of price, have secured to the foundries a volume of orders that substantially swells their output. It is noteworthy, in contrast with this demand for the less efficient type of apparatus, that the demand for high-grade hot-air furnaces has also steadily increased and that some of the manufacturers are pushing their best furnaces exclusively. While all cast iron hot-air furnaces are widely popular, the steel furnace, low in construction and with a long fire travel, is meeting with a steadily-increasing demand. Both types of furnace have been extensively used during the year to replace apparatus that succumbed to the severe strain put upon them last Winter thus substantially increasing the sales of furnaces."

DIRECTORS ELECTED.

At a meeting of the stockholders of the Locomotive & Machine Company, of Montreal, Limited, held at their office Wednesday last, in the Imperial Bank Building, the following were elected directors: A. J. Pitkin, Pliny Fisk, G. R. Sheldon, W. M. Barnum, K. W. Blackwell, J. Reid Wilson and D. W. Morrow. The following officials were elected: A. J. Pitkin, president; J. E. Sague, vice-president; R. J. Gross, second vice-president; Leigh Best, secretary; C. B. Denny, treasurer; C. E. Patterson, comptroller.

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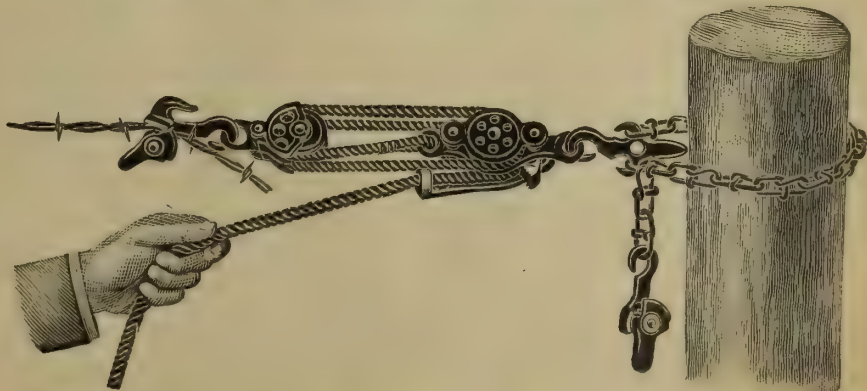


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NO. 233.—WILCOX TACKLE-BLOCK WIRE STRETCHER

TWO NOVEL HOLIDAY WINDOWS.

ONE of the most up-to-date hardware concerns in Western Ontario is that of W. R. Hobbs, Tillsonburg, who just recently moved into the south store of the new Masonic Temple. The new store is 145 ft. by 23 ft., with a basement the full length. The fixtures are in keeping with the store, everything being new and strictly up to date. The shelving on one side the store is the full length and fitted with the Bennett patent boxes finished in a carriage carmine paint with samples neatly arranged. On the other side of the store at the front is a 30-ft. wall case with doors sliding upwards, which makes a neat case for guns, cutlery and carpenters' tools. Mr. Hobbs also has all the latest improvements in harvest tool racks, nail bins, hinge bins, etc., and at the rear end of the store has a very neat office.

The illustration shows Mr. Hobbs' Xmas window, dressed by W. G. Pow.



Two Novel Holiday Windows.

The photo, however, is not a specially good one, as the reflection of the snow on the street shows on the picture and spoils the view of the goods in the bottom of the window.

In one window is placed an old-fashioned spinning wheel decorated with red white and blue; between each spoke are placed alternate red, white and blue lights, and on the front of the hub stands a red light. On the other end of the spinning wheel stand is a Union Jack thrown loosely down, on which a beautiful drooping plant is placed. Flanking on each side are to be seen two rings, each having a light in the centre and decorated in red, white and blue, with scissors and pocket cutlery thereon. In the bottom of the window neatly arranged are case carvers, table cutlery, etc.

The other window has a bicycle wheel finished with aluminum paint and the

rim and hub thickly decorated with holly. On the top edge of the rim are placed four white lights which in motion form a holly wreath. Above this wheel hangs a star with a large light in the centre, decorated with spoons. In each corner are neatly arranged Bissell carpet sweepers, whilst the bottom is covered with silverware suitable for Xmas presents, etc., with holly sprinkled around.

The back of both windows have a square made of cane strips painted red, white and blue, and hanging from the tops of these squares are two signs, "A Merry Xmas," and "W. R. Hobbs, Hardware." These are in the form of a box with a light in each.

The wheels in both windows ran day and night during the holiday season, operated by a small water motor, and when lighted at night made a most attractive window display.

THE IRON SUPPLY.

ABOUT five years ago United States Geologist C. R. Van Hise, predicted that inside of a decade the standard of marketable ore from the Lake Superior district would be between 50 and 60 per cent. of iron content, instead of over 60 per cent. the then prevailing limit. The condition has been realized in less than half a decade, and there is a prevailing opinion that even a lower standard for merchantable ore in the Lake Superior country is even now at hand.

The chief consideration in the situation is the Lake Superior supply, since from that district in 1902 79 per cent. of the iron ore production of the United States came, and in 1903 an increasing proportion. The older Eastern and Southern districts do not hold any large

ore reserves, and the newer districts are as yet all uncertain or unavailable.

Estimates made by the United States geological survey in 1902 of the amount of merchantable ore in sight, that is, ore above 59 per cent. in iron, give the ore reserve in the Mesabi district as 500,000,000 to 700,000,000 tons. The aggregate ore in sight in all the other Lake Superior districts is placed at 350,000,000.

It is fair then in the light of the present known facts about the iron ore supply in the Lake Superior districts to place the available reserve at 1,000,000,000 tons of 59 per cent. ore. With this as a basis and the figures of annual consumption as a measure, the time of exhaustion of these iron ore reserves can be estimated.

The production of the Lake Superior mines in 1890, 1891, 1892 averaged about 8,000,000, in 1893 it fell to 6,000,000. Since that time it has increased at about 2,500,000 tons a year. The production in 1902 was 27,869,000 tons and in 1903 24,300,000 tons to use round figures. Take this as indicating a present yearly demand for 25,000,000 tons, and allowing for no increase, the visible ore would be exhausted in forty years. Allowing for an average annual increase of five per cent., which is a fair increase deduced from the years since 1899, and is within the estimated general of business for the country, not allowing for the yearly enlargement of the uses of iron in all lines, it can be arithmetically computed that the available ore estimated will be exhausted in twenty-three years.

On the other side of the question is the possibility and probability that iron ores below 59 per cent. will be utilized in the near future. The new bodies cannot be very large, nor can they affect the supply in any such manner as the finding of the Mesabi. The new Baraboo district in Wisconsin, though not up to predictions, has added perhaps 700,000,000 tons to the available ore. Explorations in Canada on the Atikokan range and on the western extension of the Mesabi give some promise of new sources of supply. The recent discovery of a new iron district in Aitkin and Crow Wing counties in Minnesota may be of importance. These new districts, however, have not, since the discovery of the Mesabi in 1893, come up to the expectations. Notably has the Michipicoten district in Ontario failed to realize the hope of its discoverers.

MR. RAMSAY CHOSEN.

A new appointment has been made on the Board of Trade Council in Montreal in the selection of Mr. Alex. Ramsay, who has been chosen to succeed Mr. J. T. Wilson as the representative of the oil, paint, soap, chemical and allied trades.

ELECTRICAL

An Advance in Electrical Machinery.

W. A. JOHNSON, president and engineer of the United Electric Co., Limited, offices King street west, Toronto, has recently perfected and patented an improved type of multi-speed motor. Unlike the variable speed motors now in use, Mr. Johnston's motor does away with theostats and controlling contacts, and therefore is much simpler in operation than the types now in use. It gives minute regulation of speed within the range of the motor, i. e., on either 2 to 1 or 3 to 1 speed range. The degree of change may be within one revolution instead of within steps as in former methods of speed regulation.

Mr. Johnston has also patented new types of alternating and direct-current generators, which, he says, are in design and theory of construction altogether different from anything now on the market.

These inventions in the electrical line will be novel in view of the fact that as far as new machine design is concerned there have been no new basic patents issued for many years. They are also of special interest in that the inventions are wholly of Canadian production, and the machines, when built, will be entirely Canadian.

A Novel Telephone.

In connection with the Jubilee Exhibition held by the German Electrical Society, in Berlin, at the end of November, Mr. E. Ruhmer exhibited a rather curious apparatus in the shape of a novel telephone receiver (the electrolytic telephone). This remarkable apparatus, which could be called a "speaking accumulator," consists mainly of an electrolytic cell, including electrodes of unequal size. On being traversed by microphonic currents, this cell renders truly any words spoken into the microphone to which it is connected. By means of two hearing tubings, similar to those of a phonograph, the words spoken at the sending station may be perceived with a high distinctness.

To Locate Fish Shoals.

United States Consul E. T. Liefeld, at Freiburg, Germany, reports that a German patent has been taken out for an electrical apparatus whereby the presence and extent of shoals of fish can be ascertained. A microphone, enclosed in a water-tight case, connected with an electric battery and telephone, is lowered into the water. So long as the telephone hangs free no sound is heard, but on its coming into contact with a shoal of fish, the constant tapping of the fish against the microphone case produces a series of sounds which at once betrays their presence. The rope attached to the microphone is marked so that the exact depth of the shoal is designated.

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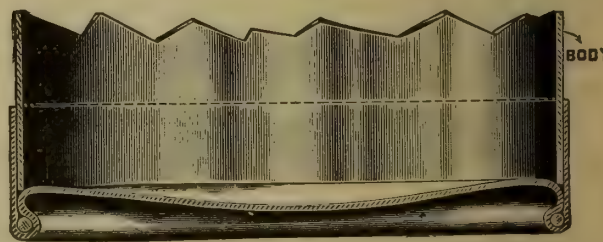
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RAILROAD METHODS CONTRASTED

GOOD advertising by leading United States railroads and a lot of gratuitous advertising in Canadian papers of American railway methods has made the average Canadian believe that Canadian railways are in many respects inferior to those under United States operation. A recent experience of a reader of this paper would indicate that even the New York Central—the best advertised and consequently the most popular road in the U.S.—has much to learn from the Canadian Pacific.

The gentleman referred to was traveling from Boston to Toronto last week over the Boston & Albany section of the New York Central Railway. Near Pittsfield, Mass., a collision between two freights blocked the line for several hours. Shortly after it was cleared, three fast passenger trains which had been held up, were started west. The first had not gone three miles before it crashed into and demolished a snow plow with its engine and caboose, be-

sides doing a lot of damage and shaking up its own passengers. The next train was following it close behind, but stopped in time. The third train came within a few yards of running into this one, so close were they running and so stormy was the night, while the fourth train also running between stations, nearly ran into the third.

It was nearly 11 o'clock in the morning before the track was cleared. There was a dining car on the first train with a considerable supply of provisions, and there were farmhouses about in all directions, yet no attempt was made to supply the poor passengers with coffee or bread or anything to relieve their hunger. They were then held up just outside of Albany for nearly an hour and when they got to Albany they were told, after making anxious inquiries, that there was a restaurant and that they could get something to eat. There was no one to show them where the restaurant was and when they came out the trains had all been shifted around and it was with difficulty they found them.

The same gentleman came up from Montreal on the Canadian Pacific on Saturday morning through the severe snowstorm. He woke up in the country near a farmhouse, and on getting out of his berth found that the train hands had gone to this farmhouse to secure everything they could. They even got the farmer's wife to bake them some rolls. The train reached Peterborough about 1 o'clock and found awaiting them there an excellent meal and no charge whatever was made.

A NECESSARY DECLARATION.

A GREAT deal of inconvenience is at present being occasioned importers by the lack of knowledge on the part of shippers in the United States of the requirements of the Customs Department regarding invoices. There is a prescribed form which should accompany every invoice and which, owing to the provisions of the dumping clause, is rendered more than ever necessary. The form contains a signed declaration reading as follows:

I, the undersigned, do hereby certify as follows: (1) That I am the..... of the exporter of the goods in the within invoice mentioned or described; (2) That

the said Invoice is in all respects correct and true; (3) That the said Invoice contains a true and full statement showing the price actually paid or to be paid for the said goods, the actual quantity thereof, and all charges thereon; (4) That the said Invoice also exhibits the fair market value of the said goods at the time and place of their direct exportation to Canada and as when sold at the same time and place in like quantity and condition for home consumption, in the principal markets of the country whence exported directly to Canada, without any discount or deduction for cash, or on account of any drawback or bounty, or on account of any royalty actually payable thereon or payable thereon when sold for home consumption but not payable when exported, or on account of the exportation thereof or for any special consideration whatever; (5) That no different invoice of the goods mentioned in said invoice has been or will be furnished to any one; and (6) That no arrangement or understanding affecting the purchase price of the said goods has been or will be made or entered into between the said exporter and purchaser or by any one on behalf of either of them, either by way of discount, rebate, salary, compensation, or in any manner whatsoever other than as shown in the said invoice. (7) Whereas, German Goods are subject to a Surtax in Canada, I certify that none of the articles included in this invoice are the product or manufacture of Germany, and that the chief value of none of such articles was produced in Germany, save and except all articles opposite which the word "Germany" is written on this invoice. Dated at blank, this blank day of blank, 190 . (Signature) blank.

We have printed this form once more so that the necessity for its use may be impressed on all foreign shippers to this country. When properly filled out, it will save importers here much annoyance and delay.

SUPPORT THE BEST MEN.

IN the speeches now being delivered throughout Ontario in connection with the general election campaign, progressive business men cannot but be impressed with the weakness of the ap-

peats made by both sides for support. The Liberals, perhaps, have the better part of the argument in their talk of building up New Ontario, and Mr. Ross certainly deserves credit for an energetic policy—but this policy was forced upon him by the natural growth of the country. Outside of this neither party has made any announcement whatever that would entitle them as a party to the support of the business men of the province, and in practice 95 per cent. of the voters are interested in the business development of the country.

Unless either party comes out with a strong policy for the further development and improvement in Old Ontario, business men should support the best men regardless of party. By best men we mean those who are known to be above everything else, honest,—who have clean records, who have been successful in whatever thing they have undertaken; who have led either as farmers, merchants, manufacturers, mechanics, or in their profession,—men as far as possible whose private affairs are in such a position that they can leave them without allowing their interests to suffer and who will not depend upon their allowance in the House for their livelihood.

GOOD IMMIGRATION AGENT.

RAILWAY officials say that an unusually large number of people have taken advantage this Winter of the cheap excursion rates from the Northwest to Eastern Canada. It is far-sighted policy on the part of the C. P. R. and other roads to offer these cheap excursion rates every Winter although it is quite true that little or no direct profit can be made from carrying passengers at such low rates. But no body of men are more directly interested in the development of the Canadian West than are the management of the Canadian Pacific, and being keen business men they are fully alive to the advantages of advertising.

In no way can the opportunities of the West be more effectively advertised than by the sending East every Christmas of several thousand successful Western farmers. These men return to their old homes carrying a story of wealth and plenty awaiting the settler in the Canadian West, and every such

Western visitor is a most efficient immigration agent. He is a man of practical experience, able to tell his Eastern friends just what they want to know about the possibilities of life in the West, and no Westerner ever yet returned East to decry the country west of the lakes.

Western Canada is prosperous, and every visitor to the East this Winter has good reason for the optimism which is his most prominent characteristic. The result is bound to be a continued flow of population from East to West. The Eastern Canada farmer is the best class of settler who comes to the prairies, and the railways are serving their own interests when they encourage the advertising of the West among the farmers of the East.

CO-OPERATION IN BUSINESS.

ONE of the most interesting features in connection with the development of Trade and Commerce in Canada during the last year or two is

ADVANCE IN TURPENTINE.

The price of turpentine has advanced within the past few hours 1 ct. on single barrels, making the selling price 76 cts. Linseed oil remains unchanged.

the increasing number of firms who are admitting employees into partnership. The time was when a favorite policy in Canadian business concerns was for employer to treat employees as automatons both intellectually and as far as remuneration was concerned. The character of work done had, of course, to be taken into consideration. It was, however, mostly from the standpoint of the manufacturer and his wares rather than from that of the workman; the thumb-screw of utilitarianism was habitually employed, with the result that an employee had no scruples about changing his position for one with more pay attached.

Many Canadian business men have discovered the penny wisdom and pound foolishness of such a policy and come to see that the interest and loyalty of employees is a thing not to be despised, even from a pecuniary standpoint. Accordingly they are extending the profit-sharing scheme to include valued and trustworthy servants. To those innured to the days of the Inquisition it would come as a delightful surprise

were they to hear the business head of a concern addressing subordinates as "colleagues," yet such is not an unusual thing in many Canadian firms today. The necessity of eliminating as far as possible the time server and at the same time the pernicious system, which incidentally may be said to have been frequently related to the former as effect to cause, cannot be too strongly advocated. In business concerns the world over there are three classes of employees; first the ambitious man, competent to fulfill his business duties and at the same time sufficiently well established to be assured of a future; second, the conscientious clerk who for some reason or other is inclined to look upon his position as neither satisfactory nor secure; and third, the time server. In corporations whose members are far-sighted and sagacious enough the tendency latterly has been to eliminate as far as possible the third-mentioned class, to remove the reason for the existence of the second, which otherwise is in danger of degenerating into the third, and lastly to swell the numbers of the first, the underlying motive being not only to serve the right class of employees in the best and most practical way, but to cultivate an unselfish loyalty among employees for the firms with which they are identified to the end that the best possible results may be obtained for the said firms.

ANNUAL MEETING.

THE annual meeting of the St. John Iron and Hardware Association was held on Monday evening, Jan. 9. The chief business was the election of officers for the year 1905. The elections resulted as follows: President, Mr. John Keefe, of the James Robertson Co.; vice-president, Mr. W. S. Fisher, of Messrs. Emerson and Fisher; secretary-treasurer, Mr. J. J. Barry; directors, Messrs. W. H. Thorne, Thomas McAvity and M. E. Agar; executive committee, Messrs. A. M. Rowan, John Keefe, W. H. Thorne, Thomas McAvity, John J. Barry, M. E. Agar; wholesale committee, Emerson & Fisher, W. H. Thorne & Co., Limited, S. Hayward Co., Limited, T. McAvity & Sons, Kerr & Robertson, I. & E. R. Burpee, McClary Mfg. Co., Limited; manufacturers' committee, James Pender, George McAvity, George W. Ketchum, W. S. Fisher, John Keefe, Maritime Nail Co., Limited, J. J. Foote.

The annual dinner of the association will be held about January 25, at the Union Club.

PERSONAL AND TRADE NOTES.

Mr. Wm. Head, a prominent plumber of Calgary, was a visitor in Toronto this week.

On Monday night, Jan. 9, the St. John Hardware Association held their annual meeting.

Sir Sanford Fleming, K.C.M.G., has been elected president of the Intercolonial Portland Cement Company of Ottawa.

The Montreal Light, Heat and Power Company have provided a rink, 60 feet by 175 feet, for the use of their employees.

Mr. H. T. Bush, manager of the Standard Ideal Sanitary Company of Port Hope, paid a visit to his agents in Toronto this week.

An application to wind up the Krammer-Irwin Rock Asphalt Paving and Cement Company of Hamilton was filed at Osgoode Hall, Toronto, on Jan. 5.

Mr. George Caverhill has been nomin-

machinery for the New Brunswick Wire Fence Company.

Mr. W. E. Thorpe, of the shipping staff of the McClary Manufacturing Company of London, has been promoted to the position of city traveler for the firm in Hamilton.

Among those who visited the wholesale trade of Toronto this week were, J. W. Barnes, plumber, Port Arthur; David Bell, plumber, Winnipeg, and E. A. Latimer, plumber, Seaforth.

Mr. Wilkinson, representing Harrison Bros & Howson, manufacturers of cutlery, Sheffield, England, has returned from his trip to Winnipeg and is a guest at the King Edward Hotel, Toronto, this week.

Mr. Geo. Palmer, a commercial traveler for Ewing & Company, cork manufacturers of Montreal, dropped dead on Jan. 5, while writing a telegram in the offices of the C.P.R. at Fredericton, N.B.

General regret has been expressed in Montreal commercial circles that Mr.

000, to be known as the Toronto Pressed Steel Co., Limited. This is another of the direct results of the extensive railway building which is expected to take place in Canada very shortly. The new company intends to manufacture a scraper especially adapted for the work of railroad contractors. A number of other railroad supplies will also be manufactured. They will install in their plant one of the largest machines of its kind in Canada. It is a large steam press, much on the lines of a steam hammer, which, with one big impression, marks out the scraper, and it is finished.

NEW ENLARGEMENTS COMPLETED.

Workmen who have been engaged for the last three months enlarging the plant of the Ideal Sanitary Company at Port Hope, Ontario, have completed the work. Three new buildings, 100 feet by 100 feet, 165 feet by 60 feet, and 125



Group picture of the staff of the MacLean Publishing Co., taken at the First Annual Banquet of the Company, Queen's Hotel, Toronto, Dec. 31, 1904.

ated as the representative of the Metal and Hardware Association on the Council of the Montreal Board of Trade.

Mr. John A. Henderson, of Acton, has left for Winnipeg, to take over the management of the Winnipeg Supply Co., dealers in lime, stone, cement, etc.

Mr. Jackson Moore, of the firm of Hammill & Moore, hardware merchants, Galt, had a narrow escape from being killed by an express train on Jan. 9.

A three days' convention of the Ontario agents of the Frost Wire Fence Company, beginning Jan. 10, was held at their new plant on Sherman avenue, Hamilton.

Mr. J. H. Ashdown, hardware merchant, Winnipeg, has been chosen to fill the place on the transportation commission made vacant by the death of Mr. John Bertram.

Mr. A. C. Chapman, of Moncton, has left for Chicago and other American cities, in quest of the most up-to-date

Robert Munro has found it necessary to withdraw from the Council of the Board of Trade. It was expected that he would have been elected vice-president for the ensuing year.

Fire broke out in Gardner & Company's hardware store, Woodstock, early on the morning of January 10. Considerable damage was done before the brigade gained control of the blaze. However it was insured for \$10,000, and this, it is thought, will cover the loss.

Mr. Hirsch, representing Symons & Company, of London, Eng., who was a visitor in Toronto for a few days this week, has left for Winnipeg and the coast. After transacting business at these two points he will pay a flying visit to San Francisco, returning again to Toronto.

A PRESSED STEEL COMPANY.

Another new company has been formed in Toronto with a capital of \$100,

feet by 50 feet, have been added to the original plant, which gives it a very imposing appearance. The new buildings are thoroughly equipped with modern appliances and equipment, and, as Mr. Bush, the manager, states, they are now in a fit condition to engage in the manufacture of a complete line of porcelain enamelware, including baths, zincs, etc. One noteworthy feature of the new plant is that all the doors, elevators and enamelling tables are worked by compressed air instead of steam or electric motive power.

ANOTHER ADVANCE ANTICIPATED

Another meeting of the jobbing plumbing houses, Toronto, was held on Thursday evening, Jan. 12. We learn that an advance is to take place shortly on baths and all enamelware, and possibly on a number of other lines in connection with this trade.

MARKETS AND MARKET NOTES

(For detailed prices see Current Market Quotations, page 54.)

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Jan. 13, 1905.

Hardware.

FOR the second week of the New Year, business generally has been excellent. Monday morning travelers resumed their regular routine of duty, and orders were being locked after this week with the same anxiety as on the busiest day of 1904. Holidays included in Epiphany were forgotten, and trade has again taken upon it the aspect of energy and aggression. Big stores have had their share of visitors from the country, and everywhere signs of activity have been in evidence. Generally speaking, trade is considered better than it was during the same period of last year.

Hockey Sticks and Pucks—The demand has slackened somewhat for these articles, notwithstanding the seasonable popularity of them. Quotations are as follows: Boys' hockey sticks, from \$1.50 a dozen up; men's, \$2.25 to \$3.50 a dozen; regulation pucks, \$2 a dozen; juvenile, \$1.15 a dozen.

Plated Ware and Cutlery—A decided lull has set in in this trade. We quote: Rogers 1847 goods 45 per cent. off list; case carvers from \$2 to \$10 per set; scissors in cases 90c to \$2.

Skates—Jobbers are still short of skates. The holidays seem to have cleaned out the stock, and the demand has not abated. We quote: Halifax pattern, plain, thirty-eight cents a pair; nickeled, 60 cents a pair; Ladies' nickel plated, plain, 58c a pair; good quality, \$1.25 a pair; good quality concave, \$1.50; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop, \$1.30 a pair; high grade nickel plated, concave, \$1.60 a pair.

Axes—There is a good demand with unchanged prices. We quote: Chopping axes, unhandled, \$6 to \$9.50 a dozen; double bitt axes, \$9.50 to \$12 a dozen; handled axes, \$7.50 to \$9.50; Canadian pattern axes, \$7.50 a dozen.

Handles—A good trade is being carried on with handles with no change in prices. Axe handles, No. 3, \$1.25; No. 2, \$1.50; No. 1, \$1.90 a dozen; adze handles, 34 inch, \$1.85 a dozen; pick handles, No. 2, \$1.70; No. 3, \$1.50 a dozen.

Carpet Sweepers—Trade is very quiet. Quotations are \$21.00 to \$31.00 a dozen.

Food Choppers—A good trade has

developed for these goods, and the demand seems to be increasing. We quote: Smallest size, \$1.05 each net; medium family size, \$1.20 each net; large family size, \$1.35 each net.

Sewing Machines—A first rate trade is being carried on for sewing machines, and the market is alive. We quote: hand sewing machines \$11.00 each net; complete machines with stand, \$18.00 and up, according to quality.

Lanterns—Steadily increasing business is being carried on. Quotations are: cold blast \$6.00; No. 0. Safety, \$4. a doz.

Sleigh Bells—A good business is being noticed in all departments. The demand is strong. Our quotations are: Brass team bells, rough, \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5 a dozen; nickeled, \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped, \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3 each.

Shovels—Good demand has kept up for shovels of all descriptions. We quote: Habitant wood, \$2.75 a dozen; Canadian, wood, 40 per cent. discount; Victor, wood, 35 per cent. discount; Steel, straight handle, from \$2.40 a dozen up; Steel, D handle, \$7 a dozen up; Childs, steel, 85 cents a dozen and up. The new list of Olds shovels is as follows: No. 2, \$10.50 per dozen; No. 4, \$11.50 per dozen; No. 6, \$12.50 per dozen. The discount is 45 per cent.

Barb Wire—Very little movement has been recorded in this line. We quote: \$2.75 per 100 lbs. f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Fence Staples—Whatever may be the reason, considerable increase in demand has been noticed for these articles. We quote: \$2.65 per hundred lb. keg for bright, and \$2.85 for galvanized; 25 to 50 lb. packages 25c. extra.

Rivets and Burrs—While the demand is not excessive, the market is strong. The following discounts have been quoted: Best iron rivets, section, carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swede iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Screws—Considerable activity has been noticed this week. A lively trade is reported. Discounts are: Round head, bright, 82 1-2 per

cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—The market is very moderate and a decided falling off has been reported.

Wire Nails—There is nothing doing in wire nails. We quote: \$2.20 a keg, f.o.b., Montreal.

Horseshoes—Steady demand has kept up, and prices are strong. We quote: "P. B." new pattern, base price \$3.50 per 100 lbs.; other brands iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—While this is a quiet period, enquiries are numerous, and future prospects are very encouraging.

Sporting Goods—Excellent business is reported in these lines and prices are firm. We quote: Centre fire cartridges, list net; sporting and military, 10 per cent. advance on list; primers, \$2.05 per thousand; American loaded shells, 20 per cent. discount; B. B. caps, \$2. per thousand; C. B. caps, \$2.60 per thousand. Standard shot, \$6.50 per hundred lbs; chilled, \$7 per 100 lbs; buck and seal, \$7.50 per 100 lbs; ball, \$8 per 100 lbs. We quote discounts 15 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

Building Paper—The demand for Spring delivery is very extensive, and prospects are bright for a large business.

Cordage—Some very encouraging reports are heard in solid centres regarding cordage.

Cement and Fire Brick—Some possibilities are reported in cement which will no doubt be more active within the next three weeks. We quote: English cement, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel ex store, and American, \$2.15 to \$2.35 ex cars.

Coil Chain—There is little business doing. We quote: 5-16 inch, \$3.90; 3-8 in., \$3.75; 7-16 in., \$3.55; 1-2 in., \$3.25; 9-16 in., \$3.30; 5-8 in., \$3.20; 3-4 in., \$3.05; 7-8 in., \$3; one inch, \$2.95.

METALS.

The market is steady for metals of all descriptions. The advance in pig lead has been thoroughly maintained, and the possibilities are that it will go still higher. Tin has again been

fluctuating, but prices are normal. Within the next ten days a decided advance is likely to take place in black sheets and tin plates. Copper is still firmly held, and the market is of a strong tone. All metals are in good demand. Galvanized iron is advancing and a change in price may be reported within a week. It would be quite impossible to buy new stocks of black iron sheets at prices which were reported two weeks ago, and this simply verifies the statement that next week's prices are to be recorded in considerable advance.

Pig Iron—Business is quite active, and numerous orders have been reported in large establishments. We quote:

"Disc," No. 1.....\$16.50 delivered Montreal.
"Dom." No. 1..... 17.50 "

Usual difference in price for lower grades.

Ferrona No. 1.....\$18.00 delivered Montreal.
" No. 2..... 17.50 "
" No. 3..... 16.50 "
" No. 4..... 16.00 "
Londonderry \$18.50 to \$19.00 delivered Montreal.
Glengarnock..... 20.00 "
Gartsherrie..... 19.25 "
Carnbroe..... 18.50 "
Carroll No. 1..... 19.50 delivered Montreal.
(special)..... 18.50 "
Ayresome No. 1..... 18.00 "
" No. 3..... 17.50 "
Summerlee..... 19.50 "
Clarence No. 1..... 18.00 "
" No. 3..... 17.50 "
No. 1 Cleveland..... 18.00 "

Bar Iron—The market is active with no change in prices. We quote: Merchants' bar, \$1.77 1-2; horseshoe iron, \$2.02 1-2; forged iron, \$1.97 1-2, net cash thirty days.

Tool Steel—The demand is fair and considerable amount of business is being done. We quote: Black Diamond, 8 cents to 9 cents; Sanderson's, 8 cents to 45 cents, according to grade; Jessop's, 13c; Jonas & Clover's, 10 to 20c; "Air Hardening," 65c per lb; Conqueror, 7 1-2c; Conqueror High Speed steel, 60c.

Merchant Steel—Business has improved considerably this week, and the market firm. We quote as follows: Sleighshoe, \$1.82 1-2; tire, \$1.92 1-2; spring, \$2.75; toecalk, \$2.42 1-2; machinery (iron finish), \$2.02 1-2; square harrow, \$1.92 1-2; reeled machinery steel, \$2.75; mild, \$1.82 1-2; rivet, \$1.82 1-2; net cash thirty days.

Cold Rolled Shafting—Large quantities have been sold for big manufacturing concerns, and business is first rate. We quote: Cold rolled shafting, 3-4 inch, to 1 7-16, \$3.85 per 100 lbs; inch and a half to 3 inch, \$3.50 per 100 lbs.

Canada Plates—Firmness rules in this market and stiff prices have been obtained. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized, 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

Black Sheets—It is now definitely stated that although no change in price can be recorded this week, an advance is certain to be announced within the next few days. Our quotations are as follows: 28 gauge, \$2.15; 26 gauge, \$2.10; 22 to 24 gauge, \$2.05; 19 to 20 gauge, \$2.20; 8 to 10 gauge, \$2.30.

Galvanized Iron—The reported advance from the manufacturers has been verified throughout the trade, and though spot prices are unchanged, it is a safe warning that higher prices are inevitable. We quote: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge, \$3.55; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40; Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40; Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40; Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$3.95; Sword and Torch, 28 gauge, \$4.05; in less than case lots, 25c extra.

Antimony—Prices are steady. We quote: 9 1-4c. to 9 1-2c.

Sheet Zinc—The market is weak. We quote: Case lots, \$6.75 to \$7.00, small quantities, \$7.00 upwards.

Tin Plates—A steady market with no change. We quote: Cokes, \$3.75, and charcoal, \$4.00.

Ingot Tin—Prices are very strong. Considerable fluctuation has taken place in the market. The standard price is 32c. to 32 1-2c.

Ingot Copper—Speculative holders brand the market as strong, and uncertainty still rules in copper. We quote: In addition to 15 3-4c. 16 and 16 1-4.

Ingot Zinc—A very steady market with an improvement upon the weakness of the past. We quote: 6 1-2c. to 6 3-4c.

Pig Lead—The market is steady, and the advance to \$3.60 has been maintained. We quote: \$3.50 to \$3.60, without concessions.

Boiler Tubes—The demand is steady, and prices are very firm. We quote: Highest grade soft steel, British and American tubes, one and a half inch, 7 1-2c; 2 in., 8 1-2c; 2 1-2 in., 10c; 3 in., 12 1-4c; 3 1-2 in., 16c; 4 in., 20c; 5 in., 45c. Price per foot net.

Scrap Metal and Old Material—A steady business has been carried on. Prices unchanged. We quote: Heavy copper and wire, 11 3-4 to 12 1-4c; light copper, 10 3-4 to 11 1-4c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 7 3-4 to 8 3-4c; light brass, 5 1-2 to 6c; lead, 2 1-4c; zinc, 2 3-4c to 3c; iron, No. 1 wrought, \$12; machinery scrap, \$12 to \$13; stoveplate, \$10; mixed country rags, 65 to 75c per hundred pounds; old rubbers, 5 1-2 to 6c.

RIVET AND BURR PRICE LIST.

The Canadian rivet and burr manufacturers have issued new standard lists, which they adopted at their meeting on January 4. The list gives price per pound in 5 and 10 lb. boxes of rivets, any size head; price per 1,000 in papers, in packages of 10 and 5 lb. boxes per pounds of tinnings' rivets, price per lb. in packages of 5 and 10 lb. boxes of coopers' rivets; per lb. in

10, 5 and 1 lb. boxes of hame rivets, price per pound of belt rivets and burrs, and price in one lb. boxes of iron burrs.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,

10 Front street east.

Toronto, Jan. 13, 1905.

Hardware.

ENCOURAGING reports are heard from the jobbers and wholesale hardware dealers this week. Some report definitely that trade is picking up very rapidly, and that there is more being done at the present time than at the same time last year. It was rather expected by these dealers that there would be a few quiet weeks after the beginning of the year, and they were agreeably surprised at the way things are turning out. Other dealers are not in a position to say just how business is compared with last year at this time, since then, travelers have not been out sufficiently long to give comprehensive reports. However, from the orders they are sending in, it might be judged that the hardware trade throughout the country is very brisk for this time of the year.

There are no changes in market quotations to be noted this week.

Iron Mowers—The demand is normal for this time of the year.

Guns and Ammunition—Trade is quiet, as is to be expected.

Washing Machines—There is the usual demand.

Chain—Nothing of importance is noted on the market; trade continues normal. We quote: 1-4 in., \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Extension Ladders—Waggoner, 40 per cent. off list.

Barb Wire—Quotations are unchanged, and the normal trade is being done.

Galvanized Wire—The recent advances hold firm. Quotations are: \$2.37 1-2 f.o.b. Cleveland.

Coiled Spring Wire—The prices on coiled spring wire have been confirmed, but are subject to change without notice. The usual trade continues.

Wire Nails—The situation is unchanged. There is quite a good demand. A fair quotation is about \$2.25 f.o.b. Cleveland.

Cut Nails—The recent advances made by Toronto jobbers remain firm. Hamilton firms are not included in the advance. Quotations are: \$2.40 per keg, f.o.b. Toronto.

Horseshoes—A very good demand for horseshoes is reported for this time of the year. We quote as follows: "P.B." base, \$3.65; other brands are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel

shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—There is a good demand with unaltered prices.

Screws—A good business is being done, with prices firm.

Rivets and Burrs—The new trade list of iron rivets and burrs, issued January 5, is now obtainable. New discounts are 60 and 10 per cent. for both rivets and burrs.

Bolts and Nuts—A very good volume of business is being done, with existing prices firm.

Woodenware—Market conditions remain unchanged, and the normal business continues.

Cordage—Orders are being booked well. Prices remain unchanged. We quote: Binder twine, Blue Ribbon, 12 1-2c; Red Cap, 11 1-2c; Tiger, 10 1-2c; and Standard, 9 1-2c; manila, 14 1-2c; British manila, 11c; sisal, 10 1-2c; double lathyrn, 10 1-2c; single lathyrn, 10c; sashcord "Hercules," 30 to 32c; "Star," 36 to 38c; cotton twine, 3-ply, 24c; 4-ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

METALS.

The temporary quietness on the metal market last week is not to be noticed this week to any great extent. Buying is now being done almost, if not quite, as freely as before Christmas. This is not confined to any special lines, but in general. There is a strong and firm market this week. On the London market, pig iron and tin have been advancing slightly during the past week, while there has been a slight decline in copper. On the local market, tin is very steady, and zinc spelter very firm.

Comparing these weeks with the same time last year, there is quite three times the buying being done, and if present prospects materialize, this will be a record year for Canada in the metal line.

Pig Iron—Canadian iron for delivery during the latter part of the year, is being bought freely. Iron has been advancing in the London market. Prices for Canadian now remain firm, at last week's advanced prices. Quotations are as follows:

Middlesboro, f.o.b., Toronto.....	\$18 90
Hamilton, No. 1, at furnace.....	18 00
No. 2, ".....	17 50
Midland, No. 1, ".....	18 00
No. 2, ".....	17 50
Ridnor, at furnace.....	27 30
Londonderry, at furnace.....	16 50 to 17 00

Bar Iron—Buying has picked up again this week. Prices remain unchanged. We quote as follows: \$1.80 f.o.b. Toronto, with discount of 2 per cent.; for extras as cut to length, while rolling, 2 feet and over, 10c per 100 lbs; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Tin—The market is steady and very quiet. There have been advances on the

London market during this week. Prices on local market remain unchanged. Quotations are from 32 to 34c. per lb.

Galvanized Sheets—The market is firm and there is a good demand.

Tin Plates—The recent advances hold firm, and there is a very good demand.

Canada Plates—All-bright plates are still scarce. The market is quiet, and prices remain firm at recent advance. We quote: Half-polished, \$2.50; and all-bright, \$4.

Brass—The market is active and recent advances hold firm. Discounts are 10 per cent.

Lead—The market is firm, and there is a very good demand. Quotations are: Pig lead, \$3.60 per 100 lbs; and bar lead, \$3.60 per 100 lbs.

Zinc Spelter—There is a very firm market, and the demand is good. Quotations are: 6 1-4 to 6 1-2c. per lb. for foreign; and 5 1-2 to 5 3-4c. per lb. for domestic.

Copper—There is a very fair demand, and the market is steady. Quotations are as follows: Ingot copper, 15 1-2c. per lb.; sheet copper, 20c. per lb.

Building Paper—A better class of orders are beginning to arrive, and the trade has a brighter and brisker appearance. Although it has rallied to a certain extent, it is quiet when taken in comparison with that of two months ago. Prices remain the same.

Firebrick—A quietness of trade is noted this week. The large manufacturing plants have once more began full operations, and repair work has been suspended. Prices continue unchanged. Our quotations are as follows: English and Scotch firebrick 30 to 35c; American, low grade, 25 to 30c; high grade 32 1-2 to 40c.

Cement—Few orders are being booked by some dealers for future shipment, while others are refusing, expecting that prices will advance before the operations begin again in the spring. No change is noted in the quotations. We quote the following: For car-load orders f. o. b. Toronto, Canadian Portland, \$1.70; American Portland, \$1.70. For small orders ex warehouse: Canadian Portland, \$1.90 to \$2; American Portland, \$1.90 to \$2.

Old Material—A good movement is noted in all articles on the market, especially so with machinery cast scrap, malleable and steel, and heavy copper and wire. Some good orders have been received from the foundries for machinery cast scrap, and jobbers are purchasing everything obtainable. Prices are all firm, although no material change is current this week. Our quotations are: Heavy copper and wire, 12 1-2c. per lb; light copper 11 1-2c per lb; heavy red brass, 10c per lb; heavy yellow brass, 8c per lb; light brass, 6s per lb; tea lead, \$2.35 per 100 lbs; heavy lead, \$2.50 to \$2.60 per 100 lbs; scrap zinc, 3 3-4c to 4c per lb; iron, No. 1 wrought, \$11; No. 2 wrought, \$3; machinery cast scrap, \$13; stoveplate, \$8 to \$9; malle-

able and steel, \$5; old rubbers, 5 1-2c per lb; country mixed rags, 65c per 100 lbs.

Coal—A scarcity in black coal makes prices very firm. Outside dealers are beginning to buy for the spring demand. Prices are expected to continue unchanged for some time. We quote the following prices: Anthracite in care at Briges: Grate, \$5.50 per gross ton; egg, stove and nut, \$5.75 per gross ton; pea, \$3.50 per gross ton.

Standard Hocking, soft coal, in cars, f.o.b. at mines: Lump, \$1.60; 3-4 inch, \$1.50; run of mine, \$1.40; nut, \$1; N. P. and S., 75c; coarse slack, 50c; box cars 10 cents per ton additional.

Youghiogheny soft coal in cars, bonded, at the bridges: 1 1-4 inch, \$2.60; 3-4 inch, \$2.50; mine run, \$2.40; slack, at \$1.90 to \$2.

PITTSBURG METAL MARKETS.

From the Iron Trade Review, Jan. 12, 1905

Pig Iron—There has been practically no change in iron prices during the week, furnaces not urging sales and consequently no lower prices have been made. We make the following quotations:

Bessemer, Valley.....	\$16 10 to \$16 25
Bessemer, Pittsburg.....	16 95 to 17 10
No. 1 Foundry.....	18 00 to 18 25
No. 2 Foundry.....	17 35 to 17 85
Gray forge, Pittsburg.....	16 25 to 16 50
Basic, Valley.....	16 05 to 16 15
Basic, Pittsburg.....	16 85 to 17 00

Steel—Two-dollar premiums continue to be asked for billets and bars, but the premium does not imply that deliveries cannot be secured. The advance is not so much due to the scarcity as to the increase in the price of iron. We make the following quotations: Bessemer and open-hearth billets, 4x4 in., and slabs, up to and including 0.25 carbon, \$21, f.o.b. mill, Pittsburg, with actual freight to points of delivery; 0.26 and including 0.60 carbon, \$1 advance, 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 4x4 in., \$2 advance; sheet and tin bars, \$23; cut bars, \$23.50; forging billets, \$23. Bessemer and open-hearth steel rods are held at \$30.50 to \$31.

Rails and Track Material—The railroads are not placing rail orders for this year very rapidly, estimates of the total tonnage booked thus far running from 600,000 to 700,000 tons.

Bars—Demand for steel bars is improving materially while specifications on running contracts are heavier than for nearly a year. Iron bars continue strong at ruling prices, although little new business is being placed.

Structural Material—Considerable railroad work is still under negotiation and the tonnage this year for railroads alone promises to be exceedingly heavy.

Sheets—The sheet market continues strong and the demand is good.

Wire and Wire Nails—The trade is still looking for an advance in wire products, although it has not materialized. Wire mills continue to operate at their capacity and there is no indication of a falling off in demand.

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TRADE CONDITIONS IN BRITISH COLUMBIA.

Special Correspondence of THE CANADIAN GROCER

Vancouver, B.C., Jan. 6, 1905.

WHEN the Provincial Government brought down a new assessment measure nearly a year ago, opposition was very strong in many influential quarters, on account of some features which were manifestly unfair, so it was urged. To allay opposition and to assure the people who were interested that the Government was ready to adopt fair amendments, an assessment commission was promised, to take up and revise the whole system of assessment and taxation in the province. That commission has now been named, and will hold its first session on the 10th inst. To prepare a case from the point of view of Vancouver interests the Board of Trade of this city is holding a meeting to-night at which general discussion is to be given, and suggestions will be received from all parties concerned.

The wholesale trade of the province has claimed that the provisions of the Act handicap the firm which carries a stock in the province, in favor of the dealer from outside. The lumbermen also oppose the clauses of the new Act which affect their industry. It will be interesting to follow the course of the commission, as the Government has to take into consideration the vital necessity of providing as well as possible for revenue, and at the same time satisfy the claims of opposing interests.

• • •

Of the making of railway charters, like that of books, there seems to be no end. The latest claimant to favorable consideration from the legislature is a proposed line from Vancouver to Lillooet. An application for charter is to be made at the forthcoming session of the provincial legislature. The object is alleged to be the opening of a large area of arable land and much good mining and timber country in the Lillooet district now without means of transportation and communication.

• • •

Ross and McLaren are two familiar names in lumber circles in eastern Canada, and the interests held by the McLaren family in this province are still large. One famous investment of the Ross-McLaren combination, the big sawmill of that name on the Fraser River at New Westminster, is to be run at last, after fifteen years of idleness, ever since it was completed. The mill has recently changed hands, Mr. L. W. David of Blaine, Wash., and associates having acquired it. Originally it was a very finely-equipped mill, but the lapse of time has seen many changes in machinery and methods, and a good deal of refitting is necessary before the big mill will run. The timber limits formerly owned with the mill were some of the finest in the province. The company now owning the mill is called the Fraser River Sawmills Co., Limited. It is not the intention to engage in local trade at all, but to do an export business entirely. Were it not for the heavy duty in the United States on finished lumber, the company would seek a market in California, which takes large quantities of lumber from Washington State mills, but the duty is prohibitive and so ship-

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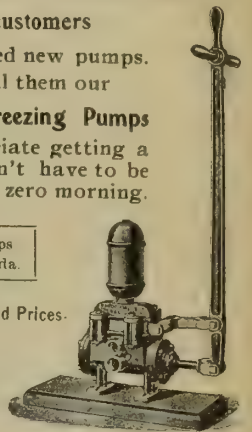
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ments will be made to foreign ports other than those of the United States.

A new mill to be erected on the Fraser River at New Westminster is that of the Small & Bucklin Co. The principals of this new company are Americans who, associated with Mr. E. J. Fader of this province, have secured large holdings of coast timber and are ready to market it in the eastern states. Work on this new enterprise is to go on at once.

The buildings erected in Vancouver in 1904 total in value \$2,000,000, including the new High School and Hospital, which together amount to nearly \$300,000. The buildings and other improvements in Victoria for 1904 amount to \$600,000, this, however, not including the improvements at the head of James Bay, where a massive wall of cut stone has been erected by the city and a large work concluded in the reclamation of the tide flats. No account is taken either, of the preparatory work for the foundation of the mammoth new C.P.R. hotel, which is well on.

The making of firebrick in this province has been successfully attempted. Messrs. F. C. MacLure and J. C. MacLure have a deposit of clay at Matsqui, on the Fraser River, suitable for the industry, and they have already had some excellent samples of firebrick made and placed on exhibition. Very large quantities of firebrick are annually imported from the old country for coke ovens, and other purposes, so that a good market locally could be secured for the local product.

Just to indicate the resources of the mining regions of the province, it may be noted that one mine, the Silver Cup, in the Ferguson camp, Lardeau district, Kootenay, a brick a day of gold and silver bullion averaging 2,000 ounces, is the record now that the plant is working. In November the big concentrating and chlorinating plant was completed, and has been running steadily on low grade ore, which it is now demonstrated the plant is adapted for handling. In addition, the company expects to ship many tons of clear silver ore to the smelters during the Winter.

Two cars of mining machinery for the Granby Mines, Phoenix, have been received recently. They comprise a giant ore crusher with capacity of 1,500 tons for one shift. The monthly pay roll of the Granby Mines at Phoenix is now \$50,000 nearly.

Pilkington Bros., the British glass manufacturers who have a warehouse in Vancouver, are making preparations for a very large addition to their premises to be used entirely as a plate glass warehouse.

Victoria customs returns—Duties collected in December, \$55,038.15; for the year, \$747,339.28. Exports for December, domestic, \$85,079, foreign, \$17,978; for the year, domestic, \$825,008, foreign \$159,876. Imports, for December, free,

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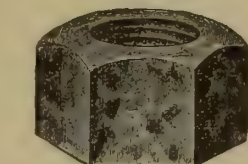
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Snap Shot



Old Nick

\$15,432, dutiable, \$200,855; for the year, free, \$461,441, dutiable, \$2,540,618.

Victoria inland revenue—Collections for December, \$15,998.20; for the year, \$181,783.57.

Vancouver customs returns, 1904—Duties collected, December, \$104,166; for the year, \$1,455,324. 1903—Duties collected, December, \$93,273; for the year, \$1,552,287. 1904—Exports, \$4,678,911. 1903—Exports, \$5,432,895.

The decrease in collections in 1904 is greater than the above figures show, because of the fact that in December \$16,863 was collected other than duty. In December, 1904, but \$2,369, of other revenue was collected. The falling off is due almost entirely to the increase of Chinese head tax from \$100 in 1903 to \$500 in 1904. In December, 1903, a great many Chinese were hurried in, to avoid the payment of the \$500 which came in force in January of 1904. The decrease in exports from the port of Vancouver is to be expected owing to the disturbance of conditions by the war in the Far East. Another very material factor was the extremely low pack of salmon on the Fraser River, a large part of which was always cleared from Vancouver. The same exceptions apply to the exports from the port of Victoria.

Clearing house returns—Victoria, 1904,

\$33,070,009, an increase of over two millions over 1903. Vancouver, 1904, \$74,029,902, an increase of approximately \$10,000,000 over 1903.

Building and improvements permits issued, etc.—Victoria (not including James Bay improvements and new C. P. R. hotel), \$600,000. Vancouver building permits alone, including high school and hospital, \$2,000,000.

TRADE CONDITIONS IN NEW BRUNSWICK.

Special correspondence of HARDWARE AND METAL.

St. John, Jan. 10, 1905.

THE beginning of the year 1905, finds general business conditions in St. John in a satisfactory state. The past year was a good one, generally speaking, in all branches of trade. There were several failures, but none of a serious nature. Christmas trade left little to be desired. The hardware merchants have shared with those in other branches of business the general prosperity, and are starting the new year with good prospects of continued success.

The St. John firms engaged in the manufacture of wire nails recently ad-

vanced the price of that commodity 3 1-2c. per keg. If the advances in galvanized iron continue, the dealers are looking for a substantial rise in the price of articles made from that substance. Some dealers, however, do not anticipate any very noteworthy advance along these lines, but a contrary view is held by many others.

A prominent merchant talking to your correspondent a day or so ago, stated that the stove business has this season been well up to the average. Of course, at present the sales are not very heavy, but the demand for stoves of many kinds a short time ago was very brisk. The majority of stoves handled by local dealers are the product of Maritime Province foundries. Sydney, Yarmouth, Halifax, Sackville, Moncton, etc., all send out goodly quantities of first-class stoves every year. It may be of interest to Upper Canadian readers to learn also that some of the firms in this section of Canada are now striving to push their goods in western markets.

Mr. H. Debenham, a C. P. R. official at Antwerp, was recently in St. John. Mr. Debenham believes that there is a great market for Canadian goods in Europe, that is, as yet, unexplored. A number of articles coming within the range of hardware men were named as possible exports by Mr. Debenham. He gave it as his opinion that it would be advisable for the Canadian Government to send a commissioner to Europe to investigate trade conditions.

The creditors of Mr. J. J. Bany, have authorized the assignee, Mr. Daniel Mullin, to accept an offer of \$500 made by Mr. J. H. Doods for the assets. Mr. Bany has been in business here for some time, acting as a manufacturers' agent and hardware broker. His failure, which was not a disastrous one, was announced early last December. In addition to other business, Mr. Bany acted as Maritime Province agent for the Crucible Steel Company of America. Mr. Bany is still doing business.

At the recent local election here, Mr. M. E. Agar, a merchant with considerable hardware interests, was the Conservative candidate. He was, however, unsuccessful.

UNITED STATES METAL MARKET.

Advance proofs furnished **HARDWARE AND METAL** by
The Iron Age, Jan. 12, 1905.

OUR monthly Pig Iron statistics are almost startling in the revelation they make of the enormous current consumption. The December product of Anthracite and Coke Iron was 1,614,000 gross tons, which the Charcoal Pig Iron output will carry to a total of 1,650,000 tons in 31 days. In spite of this very large output the stocks of the merchant furnaces declined 121,000 tons, thus indicating a rate of consumption, in a Winter month, of over 1,750,000 tons. The active capacity increased from 357,846 tons on December 1 to 377,879 tons on January 1 or at the rate, including Charcoal Iron, of close to 20,000,000 tons per annum.

The Steel companies produced in December, 1,019,841 gross tons of Pig

Iron and will make more in January. How enormous the requirements are is shown by the fact that the Carnegie Steel Company, which operated 50 blast furnaces, has 47 in blast, and that another, the second Donora, is about to blow in. In spite of this the company is short of Pig Iron and is to-day closing purchases of 25,000 tons for January delivery.

The only reserve capacity of the United States Steel Corporation is in the Chicago district, which will be called upon, since the South Chicago plants are again in full operation.

In the principal distributing markets Pig Iron is rather quiet after the heavy buying of recent months. In Northern New York a railroad equipment company has increased a former order for 9,000 tons to 15,000 tons at the same prices. In Eastern Pennsylvania one lot of 10,000 tons of low phosphorus Iron was placed at a shade under \$20, delivered, and several lots of Basic Pig, aggregating about 12,000 tons, have been marketed at prices varying from \$16.50 to \$16.75, delivered.

Pittsburg reports a good deal of activity in the Steel market, with premiums over "official prices" universally prevailing on Billets and Sheet Bars. The Steel Corporation has been forced to start the Donora open hearth steel plant.

Further sales of Steel Rails to the extent of about 32,000 tons have been effected in the Chicago district, but otherwise the market is quiet. Up to January 1 the associated mills had sold 650,000 tons.

The Cast Iron Pipe trade has been quite active. New Orleans will contract for 13,000 tons, the Brooklyn order for 11,000 tons is virtually placed and the contract for 7,000 tons for New York gas interests has been awarded.

From the West comes the report that a 16-inch pipe line 130 miles in length has been ordered from the leading interests.

The Structural mills have not taken much business since the opening of the year, but have a good deal of work in sight. In New York a local agreement relative to fabricated work has been terminated by the mills, but price-cutting has been so general and so pronounced for some time past that the rupture is not likely to affect values to any extent.

The Coke trade has been exceedingly active, with rising prices. Deliveries have been more satisfactory.

A gentlemen's agreement has been reached by Lake Ore shippers fixing prices for Old Range Bessemer at \$3.75, Mesaba Bessemer at \$3.50, Old Range Non-Bessemer at \$3.20 and Mesaba Non-Bessemer at \$3.

BUSINESS CHANGES.

ONTARIO.

J. Jamieson, plumber, Kingston, is dead.

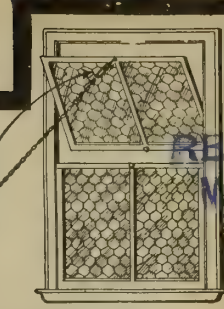
O. B. Robinson, lumber merchant, Stanley, has assigned to J. R. Wells.

Jas. Nelson & Bro., hardware and wall-paper merchants, Windsor, have been burnt out.

Kramer-Irwin Rock Asphalt & Paving Co., Hamilton, have applied for a winding-up order.

C. N. Stacey, sawmill owner, Burk's Falls, has suffered loss to plant by fire. No insurance.

Wellford Bros., manufacturers of ropes



FIRE-PROOF GLASS WINDOWS.

They give absolute security—resisting intense fire heat, as well as the action of water.

Arranged to open with this "fusible link" attachment, they close and lock automatically if a fire occurs—150° melts the link—thus giving complete and perfect protection.

This "wired glass" admits the light as freely as plain glass—is rather ornamental in effect, and greatly lessens insurance rates.

Full information if you write

METALLIC ROOFING CO.,
Wholesale Mfrs. LIMITED,
TORONTO, CANADA.

and brooms, London, are calling for a meeting of creditors.

Gardner & Co., hardware merchants, Woodstock, have suffered loss to stock and premises by fire. Insured.

N. Gerry and F. Walker have registered under the style of Gerry & Walker, hardware merchants, Brussels.

The saw and timber mills at Little Current, Georgian Bay, owned by J. & T. Conlon, Thorold, are advertised for sale.

D. F. Quinlan, harness merchant, Trout Creek, has assigned to J. M. McNamara, North Bay. A meeting of creditors is called for Jan. 20.

J. Heney & Son, coal and wood merchants, Ottawa, have dissolved partnership. J. J. Heney continues with style unchanged.

QUEBEC.

The assets of C. E. Brodeur, plumber, St. Hyacinthe, are to be sold Jan. 25.

J. Wilson, of the Jas. Wilson & Co., oils, railway and mill supplies, Montreal, is dead.

Geo. Robb & Son, grocers and hardware merchants, Knowlton, have dissolved partnership.

Geo. A. Grier and Geo. W. Grier have registered under the style of G. A. Grier & Son, lumber merchants, Montreal.

H. Lussier, saw, grist, and carding-mill owner, Ste. Julie, has assigned. A meeting of creditors is to be held Jan. 16.

MANITOBA AND N.W.T.

Reid & Smith, painters, Winnipeg, have dissolved partnership; M. H. Smith continues.

C. P. Estlin, dealer in agricultural implements, Melita, has sold to W. J. Brown.

Macdonald & Simmons, dealers in agricultural implements, Glenboro, have been succeeded by W. G. Simons.

NOVA SCOTIA.

J. White & Co., dealers in stoves and tinware, Halifax, have sold to Hiltz & Richardson.

Axe Handles—Trade is still active at unchanged prices. We quote:

Axe handles, turned, s. g. hickory, doz.	\$3 15
No. 1	1 90
No. 2	1 60
Octagon extra	2 30
No. 1	1 60

Files—A fair business is reported. We quote:

"Arcade"	70 and 10 p.c.
"Black Diamond"	60 p.c.
"Nicholson's"	62½ p.c.

Building Paper—From the city trade there is still some demand, and indications point to a very active trade during 1905. Prices are steady. We quote:

Anchor, plain	05c.
"tarred	70c.
Pure fibre, plain	67½c.
"tarred	80c.

Ammunition, Etc.—The most active trade of the season is over, but there is still some demand. We quote:

Ammunition, cartridges, Dominion R.F.	50 and 5 p.c.
Dominion, C.F., pistol	30 p.c.
"military	15 p.c.
Ammunition, cartridges, American R.F.	33½ p.c.
C.F. pistol	5 p.c.
C.F. military	10 p.c. advance.

Loaded shells:

Eley's and Kynoch's soft, 12 gauge	
black	15 00
chilled, 12 gauge	16 00
soft, 10 gauge	18 00
chilled, 10 gauge	19 00
Shot, Ordinary, per 100 lb	6 25
Chilled	6 75
Powder, F.F. Ke, Hamilton	4 75
F.F.G., Dupont's	5 00

Tinware, Etc.—We quote again as follows:

Tinware, pressed, retinned.	70 and 10 p.c.
plain	75 and 2½ p.c.
"pieced	30 p.c.
Japanned ware	37½ p.c.
Enamelled ware, white	45 p.c.
Famous	50 p.c.
Imperial	50 and 10 p.c.

Cordage—Trade in rope is of normal proportions. We quote:

Rope, sisal, 7-10 and larger, basis	10 75
Manila, 7-16 and larger, basis	15 25
Lath yarn	11 25

Axes—Quotations are:

Axes, chopping	\$ 6 75 to 12 00
"double bits	12 00 to 18 00
Bluestone	5 25

Solder—Still quoted at 21c.

Bluestone—Price has advanced to \$5.75, an advance of 50 cents over former quotations.

Iron and Steel—Prices are firm, and trade is only fairly active. We quote:

Bar iron (basis)	2 50
Swedish iron (basis)	4 75
Sleigh shoe steel	2 65
Spring steel	5 00
Machinery steel	3 50
Tool steel, Black Diamond, tool	9 50
lessop	13 00

Black Sheets—Prices are as follows:

Black sheets, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge	3 75
24 gauge	3 90
26 gauge	4 00
28 gauge	4 10

Galvanized Iron—We quote:

Apollo, 16 gauge	4 00
18 and 20 gauge	4 00
22 and 24 gauge	4 25
26 gauge	4 50
28 gauge	4 50
30 gauge or 10½ oz.	4 75

Queen's Head, 24 gauge.	4 25
26 gauge	4 50
28	4 75

Tinplates—We quote as follows:

Tinplate, IC charcoal, 20 x 28, box	10 00
IX	12 00
IXX	14 00

Ingot Tin—Quoted at 35 cents.

Canada Plates—A fairly active trade is reported at following prices.

Canada plate, 18 x 21, 18 x 24	3 25
Canada plate, 20 x 28	3 50
Canada plate, full polished	4 00

Sheet Zinc—Cask lots are quoted at \$8.25 per 100 lbs., and broken lost at \$8.75.

Pig Lead—Quoted at \$4.50 per 100 lbs.

Iron Pipe—Prices continue steady, and we again quote as follows:

Black iron pipe, ¼ inch	2 45
" ½ "	2 65
" ¾ "	3 00
" 1 "	3 80
" 1 ¼ "	5 50
" 1 ½ "	7 45
" 2 "	8 95
	12 30

Petroleum—Trade continues very active at unchanged prices. We quote:

Silver Star, per gal	22½c.
Sunlight	23½c.
Eocene	25½c.
Pennoline	26c.
Crystal Spray	25c.
Silver Light	23c.

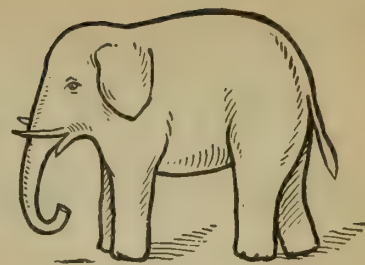
(In barrels f.o.b. Winnipeg.)

Paints and Oils—Business in paints and oils is naturally rather quiet at the present time. White lead is firmer in sympathy with the firmer tone to the market in the East. We quote:

White lead (pure)	\$5 00 to \$5 50
Bladder putty, in bbls.	0 02½
" in kegs.	0 02½
Turpentine, pure in barrels	\$ 0 87
Less than barrel lots	0 92
Linseed oil, raw	0 55
Boiled	0 58
Lubricating oils, heavy castor machine	0 26½
" extra engine	0 27
" dynamo	0 38
" back	0 22
" cylinder	\$0 50 to 0 85
(as to quality)	
Harness oil	0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00½
" 2nd pressure	1 09½

Window Glass—Trade is still fairly active, and in view of the prospects for a very active trade in the Spring, and Summer, prices may be expected to advance, unless the situation in Belgium is soon relieved. We quote:

16-oz. O.G., single, in 50-ft. boxes—	
16 to 25 united inches	\$2 25
26 to 40	2 50
16-oz. O.G., single, in 100-ft. cases—	
16 to 25 united inches	4 00
26 to 40	4 25
41 to 50	4 75
51 to 60	5 25
61 to 70	5 75
21-oz. C.S., double, in 100-ft. cases—	
26 to 40 united inches	6 30
41 to 50	7 35
51 to 60	8 40
61 to 70	9 45
71 to 80	10 50
81 to 85	11 55
86 to 90	12 60
91 to 95	14 70
96 to 100	17 35



ON TOP FOR 40 YEARS

and looks good for another term.

One Dealer wanted for each town in the West. A good live proposition for a live man.

If there is no agency in your town, **write for our Color Cards**, etc., or if already handling **Elephant Paints**, revise your special **Color Card for 1905**, and mail it to us. We are now ready for it.

OUR

Stock is complete.

Quality the best.

Prices are right.

**MERRICK,
ANDERSON
& CO.,**

WINNIPEG, - - MAN.

PAINT, OIL AND BRUSH TRADES

Petroleum Trade Conditions.

OPERATIONS have been curtailed somewhat in the high-grade fields owing to the cold weather and the recent decline in price. In Canada, as well as United States, new fields have been opened up which promise to have a large output. One of the late important strikes that has attracted the attention of the trade was made near Leamington, Ont., where a well came in at 75 barrels. Kentucky, Indiana and California are, as a result of recent discoveries, well before the public as States possessing wells with a large output. New companies have been incorporated and plans have been made to push the industry in these three States on a very extensive scale.

According to a recent report by the French Consul at Lourenco Marques, some rich sources of petroleum have been discovered in the district of Inhambane, Mozambique. The information was given with due reserve, as no definite estimate of the value of the discovery being yet possible.

Glass Industry.

Bottles are conceded as being the first product of the glass worker. It is hard to estimate which country was the originator of this industry. It is known that France was engaged in the bottle industry long before she attempted the manufacture of plate glass.

Bottled ale had its origin in England, while Italy has, for centuries, been engaged in the wine-bottle industry. Germany, to-day, leads in the manufacture of bottles, her plants and facilities being larger and of a more modern character than those of any other country.

After the bottle industry was fairly developed, window glass, tumblers, and tableware made their appearance on the market. Chemical glassware, optical glass, microscopy and photography did not originate until a much-later period. The most interesting topic of discussion to-day is the advent of the glass-working machine, which bids fair to change in the future the entire trend of the industry. The United States leads in the number of machines used. England, France and Germany have each introduced machines for the manufacture of jars and bottles, while Belgium has been forced to purchase window-glass blowing machines or surrender her undisputed

supremacy in that branch of the industry. The presence of sand and soda, of wood and coal or natural gas, and even the presence of skilled labor will hereafter cut a much smaller figure in the location of glass factories than they have done in the past.

Glass-Making in China.

China will engage in the glass business. Factories are to be erected in the Shutsien district, in the prefecture of the Su-schan-fu, province North Kiang-Su, where there are large deposits of quartz and silica of good quality. These deposits were thought to have attracted the attention of foreigners who had instructed certain missionaries to examine the deposits and report, and the result was that certain wealthy and influential native merchants petitioned the recently-organized ministry of commerce for the issuance of a charter, with spe-

cial privileges, and the exclusive right to manufacture glass in certain favored localities. This petition was granted, and the Yao-Su Kungsz company has been granted the exclusive right to operate glass factories for a period of ten years, with the privilege to transport their ware on all the waters and public thoroughfares of the empire.—Paint, Oil and Drug Review.

Roumania Petroleum Export.

The exports of Roumania during the first nine months of 1904 were 131,188 tons, against 96,540 tons in the same period of 1903. This year's exports consisted of 40,475 tons of crude, gas, and distillate oils, 60,088 tons of refined oil, and 30,625 tons of benzine, as compared with 48,053 tons of crude, gas oil, and distillates, 28,600 tons of refined oil, and 19,887 tons of benzine in the same period of 1903.

To make your paint and varnish department pay depends upon the kinds you handle.

The goods you can always reply upon to please and satisfy are

"HOLLYWOOD" PAINTS

PASTE—READY-MIXED—FLOOR

"IMPERIAL" AND "MAPLE LEAF"

VARNISHES AND SUNDRIES

The Imperial Varnish & Color Co.

TORONTO, ONTARIO, CANADA.

LIMITED,

TO THE VARNISH BUYER

the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

BERRY BROTHERS, Limited

VARNISH MANUFACTURERS

WALKERVILLE, ONT.

Write for our 100 page illustrated catalogue. Every dealer should have a copy for reference.

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green

of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED

English Varnishes

of CHAS. TURNER & SON,
LONDON.

Please mention **HARDWARE AND METAL** when writing.

AMERICAN WINDOW GLASS CO. Pittsburg, Pa.

are now prepared to do business in Canada in

Machine Made Glass

for prompt and later deliveries. Good
Quality Packing and Fair Treatment—our
motto.

OUR BUSINESS IS NOT DELAYED BY STRIKES

WRITE US FOR QUOTATIONS.

GERALD LOMER,
Sole Canadian Representative, MONTREAL

Paint and Oil Markets

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street,
Montreal, Jan. 13, 1905.

CONSIDERABLE fluctuation has taken place in linseed oil and other products of a kindred nature. Large dealers are optimistic regarding the possibilities for 1905, and orders are coming in freely for later delivery.

Turpentine—Single barrels, 78c per gallon; 2 to 4 barrels, 77c per gallon. For smaller quantities than barrels 5c extra per gallon is charged. Standard gallon is 8.6 lbs. The above prices are net thirty days, for longer terms prices are higher.

Linseed Oil—Raw, 1 to 4 barrels, 44c; 5 to 9 barrels, 43c; boiled, 1 to 4 barrels, 47c; 5 to 9 barrels 46c; delivered in Ontario between Montreal and Oshawa at 2c per gallon in advance.

Ground White Lead—Best brands Government standards, \$4.60 to \$4.75; No. 1, \$4.35 to \$4.50; No. 2, \$4.10 to \$4.25; No. 3, \$3.77 1-2 to \$3.87 1-2; No. 4, \$3.40 to \$3.50, all f.o.b. Montreal.

Dry White Lead—\$4.50 in casks, and in kegs, \$4.75.

Dry White Zinc—Pure dry in casks, 7c. in 100 lb kegs, 7 1-2c; No. 1 zinc, in casks, 6c, in 100 lb kegs, 6 1-2c.

White Zinc (ground in oil)—Pure, 25-lb irons, 7 1-4c; No. 1, 6 1-4c; No. 2, 5 1-4c.

Putty—Bulk in barrels, \$1.50; in 25-lb irons, loose, \$1.80; in tins, \$1.90; blattered putty in barrels, \$1.75.

Orange Mineral—Casks, 7 1-4c; 100-lb kegs, 7 1-2c; smaller quantities, 8 1-2c.

Red Lead—Genuine red lead in casks, \$4.50 in 100-lb kegs, \$4.75; in less quantities at the rate of \$5.75 per 100 lbs; No. 1 red lead, casks, \$4.25; kegs, \$4.75, and smaller quantities, \$5.50.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Litharge—Ground, in casks, 5c; in less quantities, 5 3-4c; flake litharge, casks, \$5.50; smaller quantities, \$6 per 100 lbs.

English Paris Green—Pure English Paris green, petroleum barrels, 15 1-4c; arsenic kegs, 15 1-2c; 50 and 100 lb. drums, 16c; 25-lb. drums, 16 1-2c; one pound paper boxes, 17c; one pound tins, 18c; one-half pound paper boxes, 19c; one half-pound tins, 20c. Terms, 2 per cent. off thirty days, or ninety days net from date of shipment.

Canadian Paris Green—Government

standard pure Canadian Paris green, has advanced 2c. per lb. and is quoted: barrels, 15 1-4c; arsenic kegs, 15c; 50 and 100 lb. drums, 16c; 25 lb. drums, 16 1-2c; one pound packages 17c; half-pound packages, 19c; one pound tins, 18c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front street east,
Toronto, Jan. 13, 1905.

EVERYTHING on this market has a better aspect this week, with the exception of glass. Reports sent to the meeting held at Charleroi, Belgium, last week, stated that a large percentage of the employees were still unwilling to return to work, and the meeting broke up without the employers arriving at any definite decision. The outlook is indeed dreary, and if the conditions do not change very quickly, some high prices will be paid to meet the requirements of the coming season. Prices, according to report, have advanced fifteen per cent. on the European market. A rumor is circulated to the effect that a prominent Montreal dealer has refused to give quotations. No particulars of this situation have been received, and dealers do not rely upon it as an article of information.

The fact that the travelers are on the road is easily seen by the amount of orders received for mixed paints. The majority of wholesale and jobbing houses have received word through their

travelers, that the majority of country merchants have only a skeleton of a stock-in-trade, and preparations are being made to meet the heavy demand which is expected in the near future. Shellac gum is firm. The price of turpentine is varying somewhat at the manufacturing point, but as the amount sold here at this period of the year is limited, no change in prices is expected. Comparatively few orders for white lead are arriving; indeed, it is learned from a reliable source that the majority of merchants are growing anxious in regard to the firm condition of lead, and, fearing an advance, are ordering large quantities. Linseed oil is quiet. Shingle stain is firmer.

White Lead—Ex-Toronto, pure white lead, \$4.75; No. 1, \$4.37 1-2; No. 2, \$4 No. 3, \$3.62 1-2; No. 4, \$3.35 in packages of 25 lbs and upwards; 1-2c per lb extra will be changed for 12 1-2 lb packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lbs, \$4.25; ditto, in kegs of 100 lbs, \$4.50; No. 1, in casks of 500 lbs, \$3.75 to \$4; ditto in kegs of 100 lbs, \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots 75 to 80c. per gallon.

Paris White—90c to \$1 per 100 lbs.

Whiting—60 to 65c per 100 lbs; Gilders' whiting, 75c.

Shellac—Pure orange in barrels, \$2.75 to \$3; white, \$2.85 to \$3.10 per barrel; No. 1 (orange), \$2.25.

Linseed Oil—Our quotation is: Raw, 1 to 4 barrels, 44c; boiled, 47c; 5 to 9 barrels, raw, 43c; boiled, 46c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Another quotation is: Raw, 1 to 4 barrels, 45c; boiled, 48c; 5 to 9 barrels, raw, 44c; boiled, 47c, Toronto, Hamilton, London, Elora and

HAVE YOU THE GRIP

in your town on the trade in goods sold for wall tinting and decorating?
It is easy to get your share of that trade, if you stock **Church's Cold Water**

ALABASTINE

Without it no dealer can expect to do much business in that line, because **Alabastine** is the goods wanted, and if not in stock, customers must necessarily go elsewhere for it.

The superiority of **Alabastine**, and the fact that it is advertised, has created the demand. **Have you the goods?**

Alabastine is made in twenty tints and white. Sold by jobbers in hardware and paints everywhere. Also by

The Alabastine Co., Limited, Paris, Ont.

The time to take Pancakes is when they are passing

So runs the proverb.

Applied to your business and ours is that it behooves you to get the agency for our

Oils, Paints, and Varnishes
when you can.

There is a line we mention this week—

SOLVO

—a paint and varnish remover—the quickest, most convenient and best manufactured.

STANDARD PAINT & VARNISH CO., Limited, WINDSOR, ONTARIO

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

We have about ten tons of No. 6 galv. wire which we offer at a snap. Quality guaranteed.

The Oshawa Wire Fence Co. Limited
OSHAWA.

GENUINE

PRATTS ASTRAL LAMP OIL

Sold in all countries and recognized as the highest grade oil manufactured.

WHOLESALE ONLY.

THE QUEEN CITY OIL COMPANY, Limited
TORONTO, ONT.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL

GLUES

of every kind, and for every purpose. Our glues enjoy large sales in almost all countries of the world, and our brands are generally to be seen amongst good stocks of glues. We believe we are giving better value than any other manufacturer, and we want to submit our lines to the Canadian test. Samples gladly sent in reply to enquiries.

GROVE CHEMICAL CO. Ltd., Appley Bridge, Lancashire, Eng.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO MONTREAL LONDON
OTTAWA WINNIPEG



A Few Minutes



will enable you to find out what you need to complete your stock of Island City Paints. Time is money in this case.

P. D. DODS & CO., Montreal Toronto Vancouver

?

FRENZIED FINANCE!

A Correspondent asks: "Please state the meaning of the phrase

FRENZIED FINANCE"

Frenzied Finance, briefly, is paying more for a thing than it is worth with the object of unloading it "upon the other fellow."

Buy the Canada Paint Company's Pure Paris Green. You will get full value for your money and, when it is "unloaded" upon the *Potato Bug*, IT will get more than it bargained for.

THE
CANADA
PAINT
COMPANY
LIMITED

MAKERS OF

**PARIS
GREEN**



Guelph, 2 per cent. off 30 days; net 30 days to outside points. Advance of 2c for delivery to outside points.

Turpentine—Single bbls 75c; 2 to 4 bbls, 74c, Toronto; 5 bbls and over f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls. 77c; 2 to 4 bbls, 76c, ex Toronto; 5 bbls and over f.o.b. point of shipment, 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c will be charged.

Glues—Broken sheet, in 200 lb. bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American white, 19c; No. 1 American white, 15c per lb.

Putty—Ordinary, bladders in barrels, \$1.65; pure linseed oil, \$2 to \$2.10; bulk in barrels, \$1.50; pure, \$1.95 to \$2; 100 lb kegs 25c extra.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.35 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—60 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 8 to 8 1-2c per lb and 9c for single tins.

Glass—See current quotations at the end of this issue.

Window Glass.

MONTREAL.

Prices continue firm. Some dealers are withdrawing quotations. The strike in Belgium seems to be no nearer its end. Our quotations are as follows: first break, fifty feet, \$1.70; second break, \$1.80; first break, 100 feet, \$3.25; second break, 100 feet, \$3.45; third break, 100 feet \$4; fourth break, 100 feet, \$4.25; fifth break, 100 feet, \$4.50; sixth break, 100 feet, \$5; seventh break, 100 feet, \$5.50; and eighth break, 100 feet, \$6; Diamond star, or double thick, first break 50 feet, \$2.30; second break 50 feet, \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$10; fifth do., \$11.50; sixth do., \$12.50; seventh do., \$14; eighth do., \$16.50; ninth do., \$18; tenth do., \$20; eleventh do., \$24, and twelfth do., \$28.50.

The discount from diamond glass is 15 per cent. and from double thick is

33 1-3 per cent. Terms four months, and 3 per cent. discount 30 days.

Petroleum.

Refined—Trade conditions are reviving somewhat, and some dealers report a good arrival of orders. Prices continue unchanged. We quote the following: Water white, 17c; Canadian prime white, 15 1-2c; American water white, 17 1-2 to 19c. ex warehouse.

Crude—Another decline of from 3 to 5c. per barrel is noted this week. The expectations on the New York market are for a further decline. We quote the following prices: Pennsylvania, \$1.45; Corning, \$1.12; Newcastle, \$1.37; North Lima, 98c; Tiona, \$1.60; South Lima, 93c; Somerset, 86c; Indiana, 93c; Canadian, \$1.38.

Production of Petroleum in United States for 1904.

The production of petroleum in United States in 1904 amounted to, in the neighborhood of, 120,000,000 barrels. This is fully 20,000,000 barrels in excess of the consumption, or in other words, the production has been gaining on the consumption at the rate of about one-fifth of the actual yearly market needs. This large increase in the production is due almost entirely to the wells of Kansas and the Indian territories, which are turning out large amounts daily. The estimate made by the Petroleum Gazette rates each state in the amount of their production as follows: California, 2,500,000 barrels per month; Pennsylvania, 2,100,000 barrels; Louisiana, 2,000,000 barrels; Ohio and Indiana, 1,825,000 barrels; Texas, 1,000,000 barrels; Kansas, Indian Territory and Oklahoma, 650,000 barrels; Kentucky, and Tennessee, 90,000 barrels; Colorado and other states, 85,000 barrels,—a total of 10,250,000 barrels per month, or 123,000,000 barrels annually.

A BUSINESS HOUSE ON SNOW-SHOES.

A. C. Leslie & Co., Montreal, held their first snowshoe tramp this week. There was a splendid turnout of employees and their friends, and without any formality they assembled and tramped to Lumpkin's Hotel behind the mountain. There a nice programme was arranged and a delightful evening was passed. Light refreshments were served and the return home was made across the Westmount golf links. Among those who contributed to the programme were Messrs. Patterson, Swift, Campbell, Copland and McCuaig.

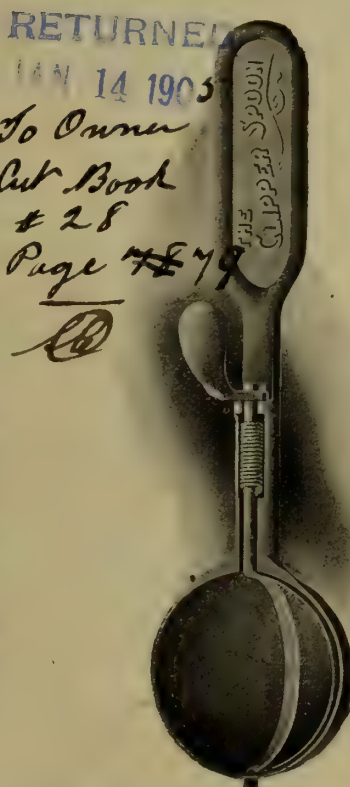
NOVELTIES FOR THE HARDWAREMAN

A Patent Combination Rule.

A RULE which combines in itself a carpenter's rule, spirit level, square, plumb, bevel, inclinometer or slope level, brace, scale, draughting scale, T square, protractor, right angled triangle, and with a straight edge can be used as a parallel ruler, has been in-



all its claims. As shown in the illustration it is provided with cleaners, which, by a pressure of the thumb lever, revolve in the bowls, cutting the cream clear of the bowl when emptying it. The arrangement of the working parts is such that they can be readily taken apart by removing the thumb piece. As not a bolt, rivet, screw, gear or spiral is used in its construction, this facility makes it easily cleaned and the spoon is kept clean in sanitary sweetness. The cup and cleaner are made of white metal non-corrosive, and the handle is of solid bronze and heavily nickleplated.



The Clipper Sanitary Ice Cream Spoon.

Ball Bearing Washers.

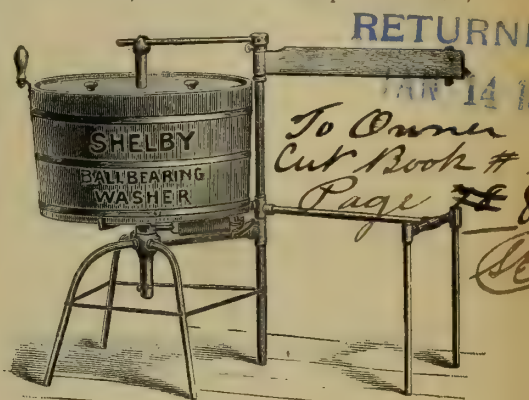
A WASHING machine, which reduces the labor and drudgery of wash day to a minimum, is the "Shelby" Ball Bearing Washer. This machine is built upon scientific principles—doing away with cog and bevel gear wheels, which are found in the construction of most machines and make it very burdensome to remove the cover of machine, as one has to lift the weight of this iron mechanism every time the cover (or lid) is to be removed, besides the danger to children's fingers when undertaking to help wash.

The "Shelby" does the washing by rubbing, and at the same time agitates the water, by throwing it back and forward through the clothes as the tub is

rotated forward and back by the handle secured to the top of one side of the tub. This is an easy and natural motion, and to a certain extent is automatic; as when the tub is rotated one way it comes in contact with a spring just at the right point, which starts the tub to rotate the opposite way; then when it comes to the point to be reversed, it comes in contact with the spring again, starting it back.

The weight of the tub and clothes are carried upon steel ball bearings, which make it rotate very easily and admits of washing a large amount of clothes at one time, and in a very little while.

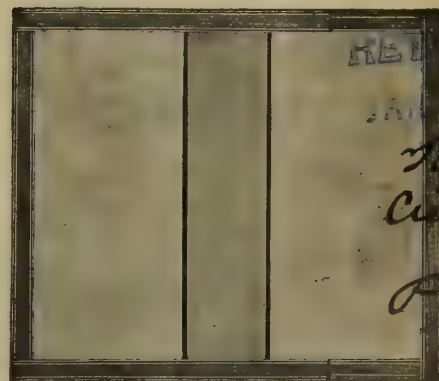
The machine and a cheaper machine,



The Junior Shelby, are manufactured by the Standard Mfg. Co., Shelby, Ohio.

The "Air Line" Adjustable Window Screen.

A. J. PHILLIPS CO., Fenton, Mich., are placing upon the market the new adjustable screen called the "Air Line," which is illustrated below and which has selling merits that will make it popular, among which are the following: The wire edges of the cloth are inserted in the wood; there are no adjusting devices in the faces of the frames, but the adjusting features are out of sight, that is, the sliding caps which connect the frames are practically concealed in the upper and lower rails. The screen is very strong, the corner joints being both glued

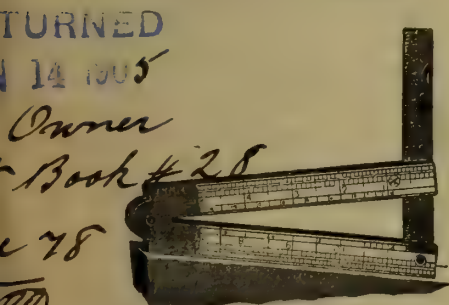


The "Air Line" Adjustable Window Screen.

and nailed. The four sliding caps are each four inches long, which gives sixteen inches of sliding clasp or grip of one frame upon the other. It is made of selected beech wood, oiled, and sufficient allowances have been made for the effect of damp weather. Furnished in black or green cloth, one dozen in a crate.

vented by L. C. Stephens, and is now being manufactured by The Chapin-Stephens Company. It is made of box-wood, with one joint, and is well protected with heavy brass binding. The plate which protects the glass being put on with screws, can be removed should it by accident become necessary to insert a new glass.

When folded it is six inches long, one and three-eighths inches wide, and three-eighths of an inch thick, and weighs the same as an ordinary broad-bound rule. The cuts represent the rule in three positions; first, as a spirit-level; second, as a try-square, level and plumb; third, as a clinometer, or slope-level; in which it is represented in taking the angle or inclination of an inclined plane—the top of a desk for instance.



The Clipper Sanitary Ice Cream Spoon.

GILES & NEILSON, Troy, N.Y., are the makers of the Clipper Ice Cream Spoons, which presents a number of novel features, designed for its evident utility, and is shown in the accompanying illustration. It is intended to supply the demand from druggists for the purpose of selling ice cream soda, for which the spoon is admirably fitted, and a patent has been granted covering

MACHINERY

MANITOBA MARKETS.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, Jan. 13, 1905.

EVERYWHERE there are reports of machinery development, in fact, the large manufacturers of machinery have been compelled to refuse orders in some cases, because if they look into the future, it would be impossible to carry out their contracts. Enquiry at the local machinery dealers' offices elicits the fact that business is very active, and not only is American machinery being ordered extensively but machinery from the Old Country has also been selected. For the Northwest it is generally believed that Quebec has received a good share of orders in the machinery supply department. The Canada Car Company is still interesting the machinery world in Quebec, and machinery tools have been ordered very extensively. It is a pleasing mark of credit to the big houses in Montreal and other parts of the Province of Quebec, that good stocks are usually carried of parts of machinery, which come very handy in rejuvenating the machinery departments in large manufactories. Collections are reported first-class, and trade enquiries were never better.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East.
Toronto, Jan. 13, 1905.

INDICATIONS this week point to a good month in machinery lines. This has been a fairly brisk week for the closing and shipping of orders, but the notable feature has been the enquiries. They are numerous, and for all classes of machinery. An increase in demand for machine tools during the past two or three weeks is to be noticed, and also it has been observed by some machinery dealers, that there is not the call for engines and boilers there was some weeks ago. Wood-working machinery is receiving considerable attention.

Hydraulic Jet Propulsion.

IT sometimes happens in the world of engineering, that a system is condemned in the earlier stages of its exploitation on the ground that it is wrong in theory when, as a matter of fact, the fault lies with the mechanical appliances. Such was the case with hydraulic jet propulsion in its early stages. The first practical test of the jet was made by the British naval authorities more than half a century ago, and the second in 1883 in a second-class torpedo boat. In both cases the results were discouraging because of the low efficiency secured, which, in the latter case, amounted to only 0.32, as compared with a similar screw-propelled boat which gave an efficiency of 0.50.

These results apparently settled the fate of jet propulsion forever, if it had not been for the verdict of a close scrutiny at a later experiment which blamed the faulty machinery used, instead of the type of the propeller. The pumps were found to be at fault and their loss in the experiment of 1883 amounted to 54 per cent., and the loss in the jet to 30 per cent. The great improvements which have taken place in pumping machinery have greatly improved the matter, and the latest type of centrifugal pumps have been known to show a much higher efficiency than 0.46, while it has been shown that later remodelling has improved the jet.

Experiments which were held in 1904, gave a pump efficiency of 0.80 and a jet efficiency of 0.85, making a total efficiency for the jet propulsion of 0.68, which are remarkable performances when compared with the results of the experiments of 1883. This seems to bring hydraulic propulsion, in the sizes thus experimented with, well up to the level of the efficiency of screw propulsion.

Machinery and Electrical Notes.

Estimates are being prepared for the erection of a new electric plant at Hull.

A by-law was passed by the council of Berlin, granting \$22,000 for lighting purposes.

A new saw mill with a capacity of 25,000 feet per day, is to be erected at La Vallée, Ont., at once.

Montreal Street Railway Company has decided to spend \$500,000 on improving the system during the present year.

Meaford's town council has made an offer of \$8,600 to W. Moore & Sons, proprietors of the electric light plant in that town. The offer was refused.

A contract has been awarded by the Toronto Railway Company, for the installation of a new storage battery in their power house, which will cost \$10,000.

A dam will be constructed in the vicinity of Fort Francis, Ont., immediately, which will cost \$3,000,000, to push forward the water power project of Backus & Co.

Enlargements are to be made on the plant of the Scott Lumber Company, of Fredericton. In the new department will be installed two stave machines and one machine for the manufacture of barrel heads.

The Montreal branch of the Canadian General Electric Company have received the contract for the erection of a turbine power plant for the Canada Car Company. This plant is the first of its kind in Canada.

A rumor is current to the effect that the Ottawa Electric, Consumers Electric, Hull Electric, Hull and Ottawa Power Companies, and Capital Company, Deschenes, Que., are about to amalgamate with a joint capital approaching \$10,000,000.

At Shawinigan, on the St. Maurice River, Que., the J. P. Morris Company of Philadelphia are installing what is claimed to be the largest water turbine in existence. It has a capacity of 10,500 horse-power. The dimensions are thirty feet from base to top; twenty-two feet wide over all; and twenty-seven feet from centre to centre of the two shaft bearings. Its total weight is 364,000 pounds. The shaft, which is of forged steel, is solid, and weighs ten tons. The quantity of water used when the turbine is in operation is no less than 400,000 gallons.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the
NIAGARA WIRE LINK
OPEN RING TYPE.

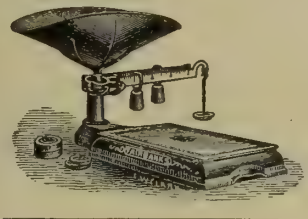
Also made in CLOSED RING, THREE CHAIN
and DOMINION (or "Short") TYPES

Oneida Community Cow Ties can be had of all
the leading jobbers. We invite correspondence
where any difficulty is experienced in obtaining
our goods.

ONEIDA COMMUNITY, Limited
NIAGARA FALLS, ONT.

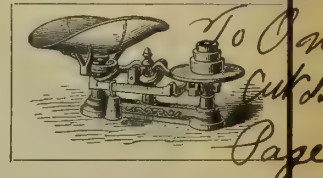
How is Your Stock of SCALES?

BEFORE PLACING YOUR SPRING ORDER
DON'T FORGET THAT IF YOU WANT



The Most Accurate
The Most Durable and
Most Sensitive Scale.
and the Scale More Largely
Sold than any other,

YOUR ORDER **RETURNS**
MUST READ **JAN 2**



FAIRBANKS STANDARD SCALES

Remember that we manufacture low-price scales
which are considerably better than many higher-priced
scales of other manufacturers.

Every Scale Guaranteed

"For goodness sake," BUY A FAIRBANKS!

THE FAIRBANKS CO.

MONTREAL TORONTO VANCOUVER WINNIPEG



IF YOU KNOW

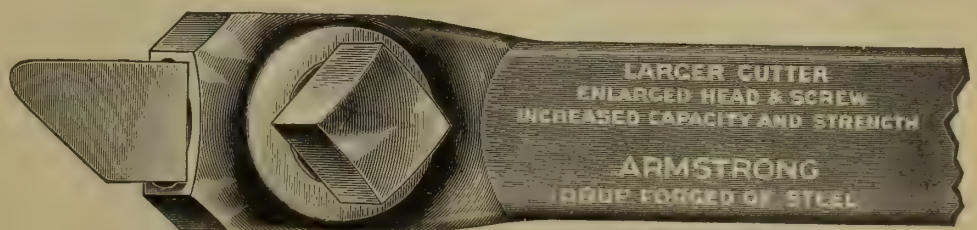


that Nine out of every Ten Pounds of High Priced Tool Steel used in Forged Lathe
and Planer Tools is absolutely wasted and that **ARMSTRONG TOOL HOLDERS**
will save Nine Dollars out of Ten you now pay for Tool Steel, besides saving
ALL FORGING and nearly all Grinding, while giving you Tools which will do
more and better work. **AWARDED GOLD MEDAL** at St. Louis.

HIGHEST AWARD FOR ECONOMY, CONVENIENCE, ORIGINALITY AND GENERAL EXCELLENCE.

**WHAT'S
THE USE
IF YOU
DON'T ACT?**

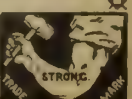
WRITE FOR
CATALOG.



PATENTED FEBRUARY 28, 1893.

Armstrong Bros. Tool Co., "THE TOOL HOLDER PEOPLE" 613 Austin Ave., Chicago, U.S.A.

IMITATIONS ARE UNSATISFACTORY—INFRINGEMENTS ARE UNLAWFUL.



A NEW COMPRESSED AIR PLANT.

THE compressed air power plant at the Union Terminal Station at St. Louis, Mo., is of note not only from the care with which every detail of installation has been worked out, but also because of the diversity and extent of the applications of the air power. It is a first-class example of the central compressed air power plant—the fruit of the present tendency towards centralization of power.

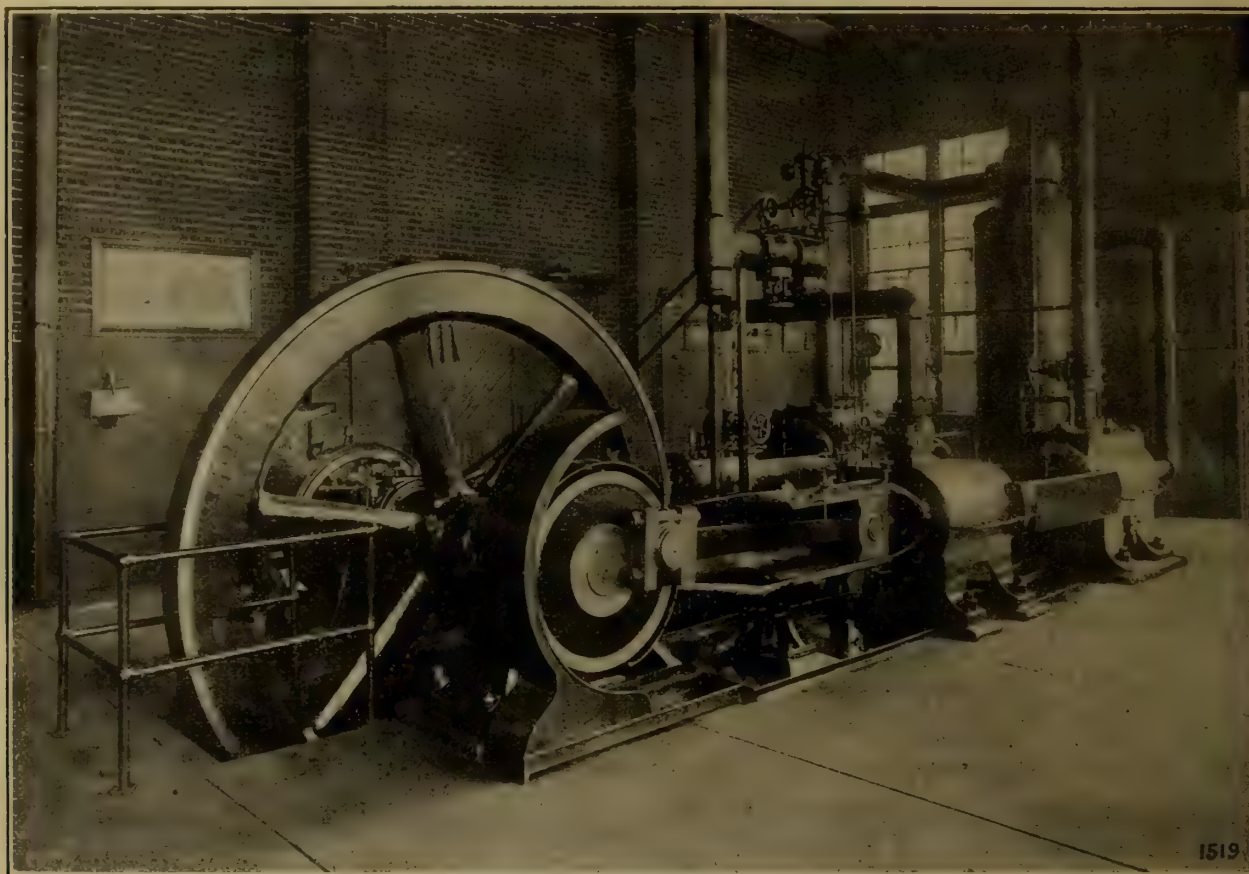
The compressing plant proper is in the main power house of the terminal and consists of two duplex steam-driven

run non-condensing and a distinctive feature is the piston inlet valve which is applied on both high and low pressure air cylinders.

Cool air is led to the compressors from outside the engine room through a supply conduit and the air discharge is delivered to twin receivers in a cooling house or tower outside the main building. The air from these primary receivers passes through a system of secondary receivers, headers and cooling tubes which reduces the temperature to that of the outside air and condenses

to which power is transmitted range from 1,800 to 5,000 feet; five distinct yards being served from this central plant.

Among the applications of the air may be mentioned the following: Pneumatic tools, hoists and jacks in the various shops and yards; charging the brake reservoirs of stationary trains; cleaning cars and car fittings; pneumatic dispatch tube systems; the operation of air engines for a variety of purposes, among them direct connected generating sets supplying current for the electric signal system; "Shone" ejectors or displacement pumps handling the seep-



Scene in new power house at Union Terminal Station, St. Louis.

two-stage air compressors built by the Ingersoll-Sergeant Drill Co., of New York. The type is that known by the makers as class "GC." The power of each compressor is about 350 horsepower and at the rated speed of 100 R.P.M. the free air capacity of each unit is 2,180 cubic feet per minute. The steam pressure applied is 150 lbs. and air is delivered to the centre of distribution at a pressure of 85 lbs. The steam cylinders of the compressors are 18 inches in diameter; air cylinders 32 1/4 and 20 1/4 inches in diameter; the stroke is 24 inches. The machines

all moisture, which collects in the receivers and is removed through drain cocks. The perfection of the cooling and drying process will be appreciated when it is stated that only once or twice in the most extreme weather has it been necessary to inject alcohol into the air pipes to prevent freezing of the delicate valve mechanism of the switch and signal system.

The applications of the air power are those common to all railway, shop and yard service. From the cooling house, which is the centre of distribution, five main pipe lines radiate. The distances

age water in the terminal subway; direct-acting bilge pumps in the accumulator pit of the hydraulic elevator system; and, most important of all, a pneumatic switch and signal system controlling the train movements of the entire terminal organization.

The electro-pneumatic switch and signal system was installed by the Union Switch and Signal Co., and its extent and importance will be realized when it is stated that during the Exposition traffic the number of trains handled per day in the St. Louis terminal averaged between 500 and 550, ag-

WORK AND PRICES RIGHT GALVANIZING
ENGINE & PUMP CO. LIMITED.
 TORONTO, ONT.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works
 "Machinery," Newport. NEWPORT, MON., ENGLAND

TRADE WITH ENGLAND

Every Canadian who wishes to trade successfully with the Old Country should read

"Commercial Intelligence"

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$1.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

STREET PAVING and SIDEWALKS a SPECIALTY

SILICA BARYTIC STONE CO.

OF ONTARIO Limited

Head Office:

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Walter Mills, General Manager
 Ask for quotations for Septic Tanks.

Water Proof Floors for
 Malt Houses, Breweries,
 Slaughter Houses,
 Cheese Factories, Cellar,
 Stable Floors, etc

"MAPLE LEAF"

Stitched Cotton Duck Belting



MADE IN CANADA

MADE IN CANADA

"Maple Leaf" is made of the best cotton duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.

"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying

Main Drive Belts a specialty.

Ask for "Maple Leaf" and take no other.

Beware of Imitations

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY

HAMILTON, ONTARIO. Limited

Use our "MAPLE LEAF" Belt Dressing

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER.

We have arranged to carry a large stock of Square and Hex Cap Screws, Square Set Screws, Bright Bolts, Washers, etc., in Canada, and can deliver from Canadian stock after February 1st., 1905. It will pay you if you are a buyer of these goods, to get in touch with us.

Temporary Offices

25 Queen City Chambers, Church St., TORONTO.

Clauss Brand

FULLY
 WARRANTED



TINNER SNIPS

Steel Faced on solid steel.

Japan Handles, Highly Finished Blades

Write for Trade Discounts.

CLAUSS SHEAR CO., 169 Spadina Ave., Toronto, Ont.

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
 Steel and Twist Barrels

Superior in Design, Workmanship
 and Finish, and the most popular
 Gun on the Market.

Simplest
 "Take Down"
 Gun Made



HARRINGTON & RICHARDSON ARMS CO.

Also makers of H. & R. Revolvers.

Catalog on request. Worcester, Mass., U.S.A.

BABBIT

NO. 1
 STAR
 SPECIAL
 HERCULES
 METALLIC
 IMPERIAL

QUALITY & PRICE TO SUIT
 ALL GRADES OF WORK.

THE CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.

Cap Screws, Set Screws,
 Machine Screws,
 Cold Pressed Nuts,
 Studs, Coupling Bolts,
 SPECIAL MILLED WORK, Etc.



CANADA FOUNDRY CO., Limited

Head Office and Works; TORONTO, ONT.

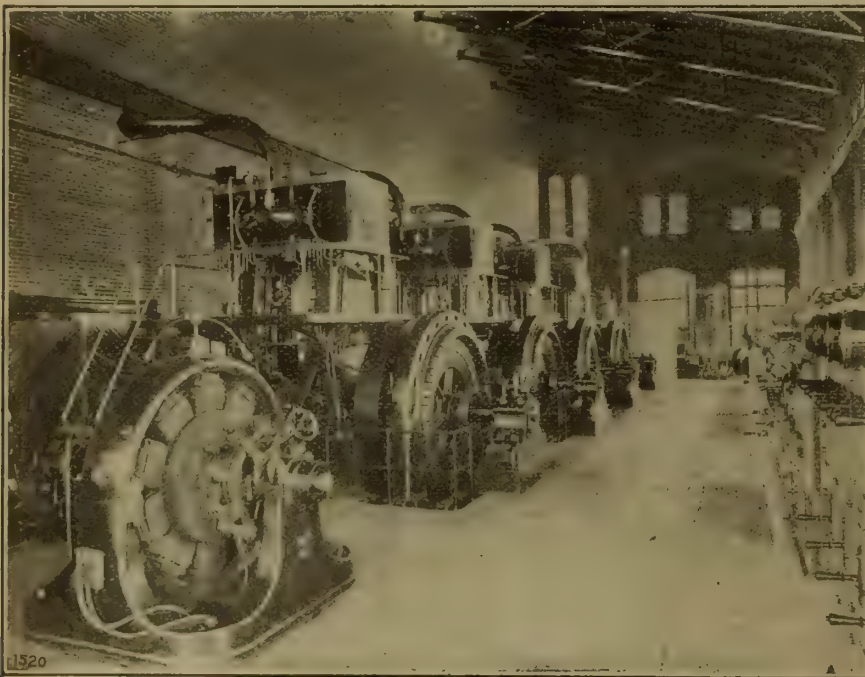
DISTRICT OFFICES,

MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
 CALGARY, VANCOUVER, ROSSLAND,

gregating 2,000 to 2,500 cars. This means the passenger traffic alone and does not include a portion of the freight service which passes over the terminal trackage. At the main terminal station alone the total number of signals is 284, the total number of switches 157, and the total number of bridges is 20. In addition there are in the 14th street, 23rd street and Grand avenue yards probably an equal number of switch and signal appliances. Under the most severe service which arose during the Exposition this system of train control operated with perfect success. The entire installation is a splendid example of pneumatic engineering and shows the importance of compressed air in transportation problems, and its perfect reliability when applied along approved lines of practice.

J. W. Langmuir, and Commissioners Robert Jaffray, A. W. Campbell, James Bampffield, George H. Wilkes of the Queen Victoria Niagara Falls Park, Superintendent James Wilson, William H. Beatty, President of the Canadian Company; A. Monroe Grier, K.C., Secretary and Solicitor; W. H. Brouse, director; Messrs. D. Coulson and J. Henderson of the Bank of Toronto, and Messrs. Edward D. Adams, Francis Lynde Stetson, Edward A. Wickes and William B. Rankine of the Board of Directors of the Niagara Falls Power Company, Messrs. Geo. Urban, jr., and Charles R. Huntly of the Cataract Power & Conduit Company, of Buffalo, De Lancey Rankine, General Manager of the Tonawanda Power Company, and the engineer of the company.

The contract of the company with



Scene in new power house at Union Terminal Station, St. Louis.

Canadian Niagara Development.

THE new power house of the Canadian Niagara Power Company, was formally opened on January 2, at Queen Victoria Niagara Falls Park, when the company put into operation its first installation, amounting to 20,000 horse power, in two circuits. This is to be supplemented by 30,000-horse power later. This first power available will probably be asked for lighting and street railway purposes in Toronto.

Besides the officers of the company, there were present other prominent men interested directly or indirectly in the development. These included Chairman

the Ontario Government called for a development by January 1, 1905, involving the construction of a tunnel with a capacity for the discharge of water producing 100,000 horse power; a canal or intake from the river with a capacity for 50,000 horse power; a wheel-pit with a capacity of 50,000 horse power, and 20,000 electrical horse power ready for sale and transmission on or before the date mentioned. The works have been constructed on a larger scale than are called for by the requirements of the contract with the Government, so that to-day the company has a canal, tunnel and wheel-pit complete for the development of 110,000 horse

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
25 " " 6 months.....	10 00
" " " 1 year.....	10 00

SITUATIONS VACANT.

MACHINIST WANTED—All round man; A man need only apply. Elliott Mfg. Co., Richmond St., Toronto.

WANTED—Machine hand—young, energetic man preferred, with some knowledge of hardware specialties; must understand the manufacture of dies for stamping steel and other work; if entirely satisfactory, may secure the foremanship of a department; steady employment to competent hand. Apply at once, Box 205, **HARDWARE AND METAL**.

MACHINERY WANTED.

Items under this heading inserted free for readers of **HARDWARE AND METAL**

STRONG Column Drill—To swing about 36-in.; must be in good order and cheap; also a portable engine and boiler, about 10 h-p, Bridge Works, Mitchell, Ont.

WANTED—One second-hand clam shell digger, with traveling derrick, complete; and one second-hand locomotive, from 15 to 20 tons; must be in good condition. A. G. Creasor, Owen Sound.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

BOILER FOR SALE—60 h.p., second-hand, return tubular boiler, good as new; bargain. Address Box 41, **HARDWARE AND METAL**.

ENGINE FOR SALE—16 h.p.; stationary, side crank. Price \$75. Address Box 37, **HARDWARE AND METAL**, Montreal.

CHOPPERS CHEAP—We have a number of second-hand plane choppers that we must sell at once. They include Robinson, Stratford and other makes. We will refuse no reasonable offer, as they must be sold. Send for prices, and say how much power you have to spare. S. Vessot & Co., Toronto.

THE Dunbrooke and Meater Pat. Lumber Hoisting Machines for sale. Can be seen at John Winfield & Co., 176 Front street east, Toronto.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

STANDARD SCALES, valves, trucks, steam specialties; W. I. pipe and fittings, machine tools, mill supplies, scale repairing a specialty; prompt delivery from stock; write for prices. The Fairbanks Co., Toronto.

power. Five electric units of 10,000 horse power each are being installed, two of which were put into successful operation to-day. The other three will be ready for commercial use also by May 1, of this year, and there will be room in the completed wheel-pit for six additional units of the same size which can be quickly installed as the demand may require such installation.

Each unit is composed of a 10,000 horse power turbine wheel designed and manufactured by Echer Wyes & Company, of Zurich, Switzerland, placed in the bottom of the wheel-pit and connected by a vertical shaft with a 10,000

been completed for some time. The power house of the Canadian Company is connected with these two power houses on the American side by cables laid in conduits through the Canadian park and the city of Niagara Falls, crossing the river on the upper steel arch bridge of the International Railway Company just below the American Falls. Every power customer, therefore, of these two companies, whether he be on the American or Canadian side, has the assurance of continuity of supply of power given by these connections and the plants on both sides of the river will be operated as one plant.

When he started, Mr. Silvester occupied only a rented building. Since, he has put up a building, 60 x 33 feet, in which a full line of general hardware is carried. Extensions of business connection have been made from time to time, until now, in addition to being the hardware merchant, Mr. Silvester is the local undertaker, lumber, coal and wood dealer in his town. This, combined with running a 200 acre farm, gives him ample scope for his energy.

Most of the business has been conducted under Mr. Silvester's personal supervision. Until two months ago, he looked after even the small details, but



A Typical Manitoba Hardware Business—Geoffrey Silvester's Store.

horse power, alternating current generator, manufactured by the General Electric Company of Schenectady, N.Y. The water is led to the turbines from the canal penstocks ten feet in diameter and after driving the wheels is discharged through a short tunnel whose portal is at the water's edge, in close proximity to the Horse Shoe Falls. The tunnel is driven through solid rock and lined throughout with concrete and specially burned brick. This company is owned by the Niagara Falls Power Company, whose two power houses on the American side, containing an installation of 105,000 horse power, have

A MANITOBA HARDWARE BUSINESS.

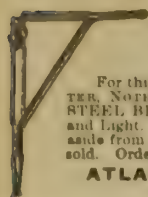
RETAILING in Manitoba and the Northwest Territories is, in many respects, different from retailing in older sections of the Province. Few business houses in Eastern Canada could duplicate the history of Geoffrey Silvester, hardware and lumber dealer, Elkhorn, Man.

It is just seven years since Mr. Silvester opened a small hardware store in Elkhorn. In that seven years he has conducted his business with enterprise and energy, and has benefited in a most material way from the growth of population in his district.

at that time he engaged a stenographer and book-keeper, who now takes much of the detail off his mind. This move has already proven a wise one.

"The soundest principle for business in a small place," says Mr. Silvester, "is to have a good stock of the best goods; to do business on straight, business-like principles; to have one price, to have it marked, and to stick to it."

Mr. Francis N. Cullen, president of the defunct Dominion Brass Works, of Port Colborne, is held by the authorities on a charge of defrauding the residents of Port Colborne.



Will Hold Up a Shelf!

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanese, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,

New Haven, Conn., U.S.A.

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish Chemical and Drysaltery Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.

19 LUDGATE HILL

LONDON, ENG.

Order a stock of

"Windmill Best" Galvanized Sheets

Cut Prices

Made by

Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, - Montreal

There are polishes and polishes.

The polish of polishes is

YORK METAL POLISH

(Liquid or Paste)



Matchless for metals.

Cleanses and polishes at one operation.

ANGLO-CANADIAN SUPPLY CO.

29 Church-St., TORONTO.

OAKEY'S

The original and only Genuine Preparation for Cleaning Cutlery. 6d. and 1s. Canisters

'WELLINGTON'

KNIFE POLISH

JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

JOHN FORMAN, 644 Craig Street MONTREAL.

STOVES AND TINWARE.

A Clever Take Off.

By Sidney Arnold, in American Artisan

WHICH of us have not read the playful hyperboles of stove trade literature? Language that would be meretricious when used in describing Niagara Falls has been showered on an overgrown tin can misnamed a stove. Trifling alterations are described as though the contrivances of a second Edison were under discussion, and as to results, why even a promoter describing an abandoned hole in Colorado as a gold mine could get pointers from reading what this or that newcomer in stovedom can accomplish.

A clever take-off on the exuberance of stove manufacturers is found in the accompanying circular describing the New Globe Air-tight Hot Blast manufactured by the Globe Stove & Range Company, Kokoma, Ind. Now I have seen this stove and will testify that it is a very superior article, and the heavy sales it has had shows that a great many other people think so also, but of course it is unworthy of the following facetious rhapsody sent out by its manufacturers:

The New Globe Air-Tight Hot Blast is acknowledged by calorific experts everywhere to be a paragon of economy, the climax of comfort, and king of all heaters.

Its fuel-saving and heating qualities are simply incredible and incomprehensible to the ordinary stove manufacturer.

It is pre-eminently a soft-coal burner and you can use the cheapest grades of this fuel, slack and even screenings with the same convenience and pleasing results that you have heretofore obtained only from hard coal in a base-burner.

With its air-tight down draft, and powerful super-heated blast of oxygen from above, it consumes the smoke, gas, soot and cinders, leaving nothing behind but a few white ashes and a pleasant remembrance.

It will burn all grades of hard coal and coke as satisfactorily as a base-burner that costs three times as much money.

Three tons of \$1.80 slack will run this stove all winter, costing 90 cents a month or about 3 cents a day.

This stove radiates the heat to the

floor and out into the room; very little of it goes up the flue: you can hold one hand on the pipe and light a cigar on the base of the stove with the other at the same time.

A newspaper will burn in this stove for ten minutes and give out a heat perceptible eight feet away.

A handful or two of shavings will give about the same results, in this stove, as an arm-load of wood in the ordinary heater.

A gallon of sawdust will burn all night and keep a room comfortable till morning.

A few wisps of hay or straw, tightly twisted will keep your house warm in zero weather. This is used, in our heater, quite extensively in the north-west, where wood and coal are very scarce and expensive.

Ordinary barnyard compost makes an excellent fuel in this stove. Its air-tightness prevents any odor. Its use is clean, convenient and very economical. This is a favorite fuel in many parts of Kansas and the Southwest.

This stove will hold fire 72 hours without any attention, and about a week with just a little care.

In the final test of this stove it was heated for five days and nights to a cherry red, and when cooled was filled with water to the top band and it never leaked a drop.

Many people use this stove during the warm months as a rain-barrel, or summer cistern.

By placing a tube in the front register to draw off the water, it makes a most convenient and economical refrigerator.

On account of its style and beauty many ladies leave it in the parlor during the summer and use it as a moth chest for their best furs and finest woolens.

A short acquaintance with this beautiful air-tight heater will suggest many other useful things for which it can be used, that limited space prevents enumerating here.

Mr. Harold E. Copp, of the Copp Foundry, Fort William, was presented by the staff on Saturday, December 31, with a solid oak chair.



Solarine Bar Polish

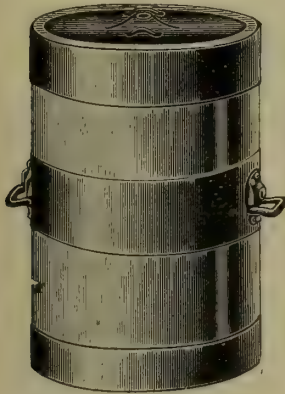
Best and cheapest preparation for polishing:— Brass, Copper, Steel, Tin, Zinc, Bar Fixtures, Kitchen Utensils.

A rapid cleaner expressly designed for all kitchens.

For Ontario, Address

H. F. FALKNER,
60 George St., TORONTO

E. T. Wright & Co., Hamilton, Ont.



MILK CANS,
MILK CAN TRIMMINGS,
SAP BUCKETS,
SAP SPOUTS,
DAIRY PAILS,
STRAINER PAILS, ETC.

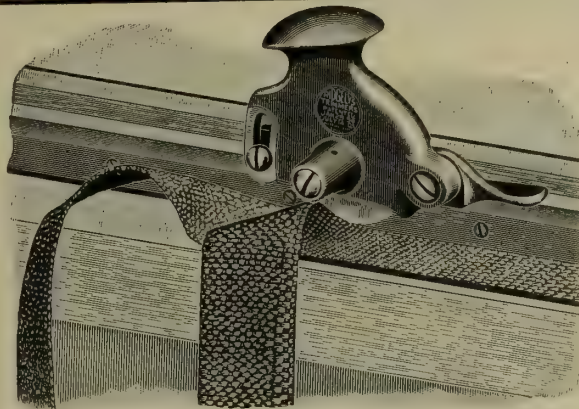
A PERMANENT
and Handsome Roof.



Arrow Brand Asphalt Ready Roofing

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write to-day.



Ridgely's Model B Trimmer

In conjunction with our famous **THREE-PIECE STRAIGHTEDGE** makes an outfit for trimming paper that will do the work in one-sixth the time it takes to do it with a knife or shears, and do it accurately. Guaranteed to give perfect satisfaction.

For full particulars address

THE RIDGELY TRIMMER CO.,
Manufacturers,
Paper Hangers' Supplies,
SPRINGFIELD, OHIO, U.S.A.

Send for Catalogue No. 16.

67

—Wood age has passed
—Iron age has come
—So has Cutt's **All Metal Ash Sifter**.
—The best sifter made, bar none.
—Retails for 25c.

68

—Gentlemen, your orders.
—We ship to the north pole, and nearer points.
—Would like to ship some to you.

C. M. CUTTS & CO., SOLE MAKERS **Toronto Junction, Ont.**

Reputation is a known quantity in business. Given two articles of equal merit, the choice always goes to the one your customer knows. How much quicker the choice is when both merit and reputation belong to the one article, as they do to the

Imperial Oxford Range

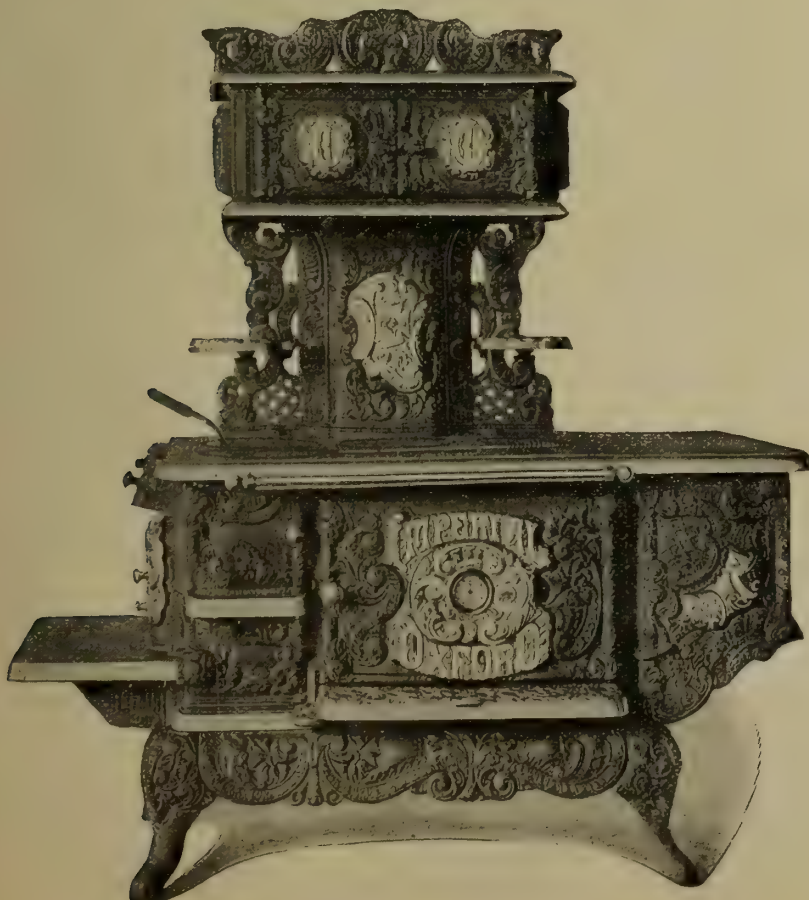
We would advise you to order early as present indications show a big increase in the demand. Orders will be filled as received.

The Gurney Foundry Co., Limited

TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

The Gurney-Massey Co., Limited, Montreal, Que.;
The Gurney Standard Metal Co., Limited, Calgary, Alta.



INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Dominion Coal Company's output for the month of December was 199,466 tons, distributed as follows:—Dominion No. 1, 42,748 tons; Dominion No. 2, 37,566; Dominion No. 3, 17,414; Caledonia, 39,942; Reserve, 43,678; Hub, 2,813; International, 10,405; Dominion No. 6, 1,555—a decrease of 33,254 tons, compared with November. The output for the year was as follows:—Dominion No. 1, 1,415,192; Dominion No. 2, 634,624; Dominion No. 3, 347,264; Caledonia, 519,457; Reserve, 768,256; Hub, 143,922; Dominion No. 6, 193,152. Total for 1904, 3,023,522 tons. Total shipments, 2,980,037 tons.

The tonnage of ore shipped from the several mines for the week and the total for year: Le Roi, 2,490; Central Star, 1,560; War Eagle, 1,050; Le Roi No. 2, 550; Spitzee, 130; Jumbo, 216; White Bear (milled), 30; total for week, 6,026; for the year, 342,325.

The audit office at Ottawa has received claims from the Algoma Steel Company, Sault Ste. Marie, for bounty on pig iron amounting to \$19,540. This is for two months ending December 15. During this period about 13,000 tons of pig iron were produced.

The record made by the Rossland mines during the past year was a good one, the total output being 342,324 tons, of a value of \$4,400,051.58, which is considered to be an excellent showing. The total tonnage for the camp for 11 years since ore was first produced is 2,020,198.

Crow's Nest Collieries for the week ending Dec. 30, had an output of 13,390 tons, with a daily average of 2,678 tons, compared with an output same week a year ago of 8,450 tons, with a daily average of 1,690. By collieries the output was Coal Creek, 7,983; Michel, 4,518; Carbonado, 889.

The completed rolling mills of Canada aggregate eighteen, of which one has a Bessemer steel plant, one a Tropenas steel plant, and five open hearth steel plants. The annual capacity of the blast furnaces is placed at 830,000 gross tons of pig iron; of the Bessemer and Tropenas steel plants, 200,800 tons; the open hearth steel plants 451,000 tons, while the total capacity in finished, rolled and forged products is placed at 839,600 tons.

Application will be made at the next session of the Ontario Government for the organization of the Algoma Copper Range Railway Company. It is the in-

tention of the new company to build a mining road from Batechewanning Bay on Lake Superior to Aubrey Falls, a distance of seventy-five miles. This line will open up a great mining district in that section. A line of boats will also be operated by the company in connection with their other undertakings.

Weekly production of pig iron in United States was less than 200,000 tons, when the year (1904) opened, the lowest figure since September, 1897. However, a revival started in August and a steady improvement was noted until the end of the year, the blast furnaces producing twice the amount that they were twelve months earlier. According to the Iron Age, the weekly statistics of active blast furnaces was as follows:

	1904.	1903.	1902.
January	195,558	353,800	298,460
February	282,995	343,111	332,045
March	318,223	354,733	323,028
April	337,257	376,576	337,424
May	368,244	381,697	352,064
June	336,197	398,139	344,748
July	272,301	395,042	350,890
August	246,092	362,330	336,465
September	291,573	369,933	335,189
October	319,249	361,492	345,048
November	334,249	282,219	337,559
December	357,146	251,181	343,581

NOTES.

Sufficient orders have now been received by the Locomotive and Machine Company of Montreal, to keep its workshops at Longue Pointe in full blast until next September.

The Provincial Secretary for Ontario has, by a license, authorized the Madoc Mining Company of the State of New Jersey, to carry on business in Ontario under the name of the American Madoc Mining Co.

10,901 tons of silver-lead ore and 2,239 tons of zinc ore have been shipped from the mines in the Slocan district, B.C., during the year 1904. During the year the Slocan Star paid a dividend of \$50,000, and the Sunset distributed \$12,000.

The output from the Nova Scotia mines in 1904 is estimated at 4,650,000 tons. An approximate estimate of the shipments by counties is: Cape Breton county, 3,250,000 tons; Inverness county 250,000 tons; Cumberland county, 600,000 tons; and Pictou county, 550,000 tons.

A newly-organized company is taking advantage of the offer of a bonus of two hundred and fifty thousand dollars offered by the city of Sydney, N.S., two years ago to any company which would

start a ship-building industry in that city. Besides erecting a ship-building plant capable of turning out one 15,000-ton steamer every year, this company will build a floating dry dock which will hold an 8,000-ton vessel.

COMPANIES INCORPORATED.

The Premier Electric Light and Power Co., Wallaceburg, share capital \$40,000; purpose to operate works for the production and sale of electricity for the purpose of light, heat and power. The directors are: W. D. McRae, D. C. MacDonald and H. A. Stonehouse, all of Wallaceburg.

The Toronto Pressed Steel Co., Toronto Junction, share capital \$100,000; purpose to manufacture and sell railway supplies and contractors' supplies, including wheel and drag scrapers and other implements. The directors are: J. R. L. Starr, J. H. Spence, T. E. Wilson, A. A. Rogers, and S. Whittaker, all of Toronto.

Hamilton Incubator Co., Hamilton, share capital \$10,000; purpose to manufacture, buy and sell farm implements and household appliances of all kinds, incubators, brooders, stock-raising apparatus and machinery. The directors are: J. Fletcher of Mount Albion, and D. H. Fletcher and G. M. Jones, both of Hamilton.

The French River and Nipissing Navigation Co., Sturgeon Falls, share capital \$25,000; purpose to construct and navigate boats, scows and steam vessels for the conveying of all manner of merchandise. The directors are: J. A. Clark and J. W. Hendrie, both of Sturgeon Falls, and Wm. Hendrie, jr., of Hamilton.

Keenan Woodenware Mfg. Co., Owen Sound, share capital \$100,000; purpose to manufacture woodwork and woodenware of all kinds. The directors are: J. E. Keenan, J. C. Keenan, W. P. Keenan, and R. T. Keenan, all of Owen Sound.

Bonanza Creek Gold Mining Co., Toronto, share capital \$1,750,000; purpose to carry on the business of a mining company in all its branches. The directors are: J. Payne, R. Credicott, A. Foster, W. Gilchrist, and T. Taylor, all of Toronto.

Eureka Planter Co., Woodstock, share capital \$50,000; purpose to take over the assets of the Eureka Planter Company and manufacture and trade in agricultural and other implements, tools, etc. The directors are: J. A. Straith, S. B. Best, C. N. Choate, A. McNee, and P. J. Freeman, all of Windsor.

Canadian Ammunition Co., Montreal, capital stock \$500,000; purpose to manufacture and sell cartridges, torpedoes, shells, caps, shot, etc. The directors are: L. A. Boyer, H. D. Anthier, J. E. Lareau, D. Thibaudeau, and L. Boyer, all of Montreal.

THE METROPOLITAN BANK

CAPITAL PAID UP	-	\$1,000,000.00
RESERVE FUND	-	\$1,000,000.00
UNDIVIDED PROFITS	-	\$103,047.79

DIRECTORS :

REV. R. H. WARDEN, D.D.,	-	President.
S. J. MOORE, ESQ.,	-	Vice-President.
D. E. Thompson, Esq., K.C.,	-	of Thompson, Tilley & Johnston.
His Honor W. Mortimer Clark, K.C.,	-	Lt. Gov. Province of Ontario.
Thos. Bradshaw,	-	Vice-Pres. Imperial Life Assce. Co.

HEAD OFFICE, - TORONTO, ONT.

W. D. ROSS, General Manager.

SAVINGS BANK DEPARTMENT open at all Branches, and interest allowed at best current rates on deposits of one dollar and upwards.

Statement of the Affairs of the Bank as at December 31st, 1904.

LIABILITIES.

Capital Stock paid up..	\$1,000,000.00
Reserve Fund	\$1,000,000.00
Rebate on Bills Dis-	
counted	11,365.44
Balance of Profit and	
Loss Account, carried	
forward	103,047.79

	1,114,413.23
Notes of Bank in circula-	
tion	892,777.50
Deposits not bearing inter-	
est	549,875.55
Deposits bearing interest	
(including interest	
accrued to date)	1,525,742.74
Deposits by other Banks	
in Canada	113,008.22

	3,081,404.01

\$5,195,817.24

ASSETS.

Specie and Dominion	
notes	\$ 404,595.85
Deposit with Dominion	
Government for secur-	
ity of note circulation	28,464.62
Notes of and cheques on	
other banks	329,285.33
Balances due from other	
banks in Canada	322,375.41
Balances due from agents	
in United Kingdom ..	9,756.90
Balances due from agents	
in foreign countries ..	105,797.74
Railway and other bonds,	
debentures and securities	505,828.13
Call loans secured by	
bonds, debentures and	
stocks	566,042.42

	\$2,272,146.40
Current loans and dis-	
counts	2,834,352.60
Notes and bills overdue	
(estimated loss provid-	
ed for)	5,847.93
Bank premises, safes and	
office furniture	82,889.98
Stationery, etc.	580.33

	2,923,670.84

	\$5,195,817.24

FINANCE AND INSURANCE

ANOTHER entirely satisfactory report was presented to the shareholders of the Bank of Montreal in annual meeting assembled on December 5. Its principal features included an increase in deposits bearing interest of \$13,265,000, an increase of call loans of \$9,143,000, an increase in current loans of \$6,699,000, and a decrease in the balance due by agencies of the bank and other banks outside Canada of \$4,114,000. The bank's profits for the year ending October 31 were, after deducting charges of management, and making full provision for all bad and doubtful debts, \$1,609,207.95, out of which was paid \$1,400,000 in dividends at the rate of ten per cent. per annum, leaving \$209,207.95, which added to balance of profit and loss account of \$373,988.06, carried forward from the year ending October 31, 1903, gives a balance carried forward for this year of \$583,196.01. In a nutshell, the bank earned ten per cent. on its paid-up capital of fourteen million dollars, and has been able to add two hundred thousand dollars odd to profit and loss account.

...

THE decision of the Canadian Bank of Commerce to increase its capital stock from \$8,700,000 to \$10,000,000 draws attention to the great increase in the business of that institution and also indirectly to the remarkable position of nearly all the banks of the country. At the present moment the capacity of Canadian banks is being taxed as never before. Their combined capital is barely sufficient to handle the country's business, and the action of the Bank of Commerce in increasing its capital is no doubt but the first step of several that will shortly be taken for the increase of the banks' capacity. It is freely stated that at least two other banks will make a similar move at the end of the year and perhaps others will follow. The two mentioned at present are the Dominion Bank, which is expected to issue \$1,000,000 new stock, bringing its capital up to \$4,000,000, and the Standard Bank, whose capital has hitherto been \$1,000,000.

...

THE statement of profit and loss and the general statement submitted to the shareholders of the Eastern Townships Bank at the annual meeting is a highly satisfactory one, the net profits for the year amounting to \$306,968, which is equal to nearly 12 1-2 per cent. In addition to this there was the sum of \$22,995 premium paid on new issue of capital stock and \$27,647 balance at credit of profit and loss brought forward from last year, making a total of \$357,611. Out of this, two half-yearly dividends at the rate of 4 per cent., making 8 per cent. per annum, were allotted to shareholders; \$50,000 was transferred to rest account; \$40,000 was applied to the reduction of value of assets, and \$40,000 in reduction of bank premises and furniture. This left a balance of \$30,217 at the credit of profit and loss.

NOTES.

A branch of the Sovereign Bank was opened at Galt on December 13.

Mr. W. J. Stark is the manager of the new market branch of the Sovereign Bank in Toronto.

Another branch has been opened by the Canadian Bank of Commerce, this time in Claresholm, Alberta. This makes the 112th branch of this large Canadian institution—106 in Canada, 5 in the United States and one in London, England.

The German-American Fire Insurance Co., one of the leading companies in the United States, as a result of the high rates being charged by the English companies in the larger cities of Canada, has decided to invade the Canadian field and will have its head offices in Montreal.

The annual statement of the Bank of Toronto for the year ending November 30, 1904, shows a fine increase in net profits, due, partly at least, to the enlarged capital. The net profits, after making due provision for possible losses, are \$445,425, or nearly 15 per cent. of the capital stock. The rest account has been added to by \$145,570 during the year, and is now \$300,000 in excess of its paid-up capital of \$3,000,000.

The Canadian Manufacturers' Association have appointed the following gentlemen as the permanent committee on insurance for the association: P. H. Burton, W. B. Tindall, P. W. Ellis, W. P. Gunhy, Richard A. Donald, J. P. Murray, C. N. Candee, J. W. Cowan, A. Jephcott; R. M. Bertram, Montreal; C. B. Gordon, C. C. Ballantyne, Col. J. H. Burland, W. A. Candle, F. H. Whitton, Hamilton; Col. W. M. Gartshore, London; Geo. E. Amyot, Quebec; Geo. McAvity, St. John; T. M. Cutler, Halifax.

The Canada Trust Co., Limited, with a capital stock of \$250,000, has received letters patent of incorporation under the Manitoba John Stock Companies Act. The objects of the company are to carry on the business of a trust and loan company, to advance money on real estates and other securities and to act as financial agents for individuals and corporations, etc. The head office will be in Winnipeg. The promoters of this company are well known residents of Portage la Prairie and Winnipeg, and the provisional directors include the names of H. Armstrong, M.P.P., E. Anderson, J. Cornvn, E. J. O'Sullivan and H. J. Hardy.

To meet the requirements of expanding Canadian business the directors of the Canadian Bank of Commerce passed a resolution at the annual meeting on December 9, providing for the issue of \$1,300,000, the balance of the authorized capital stock of \$10,000,000. The new issue will be allotted to shareholders of record January 12th, 1905, at which date the books will close. The proportion of allotment will be one new share for every 6 69-100 of old stock. The stock, which is in \$50 shares, will be issued at 70, that is, 140 in comparison with yesterday's price of the old stock on the Exchange, 164. The new issue will bring in a premium of \$520,000.

WESTERN

Incorporated
1851

ASSURANCE COMPANY.

**FIRE
AND
MARINE**

Head Office
Toronto, Ont.

Capital	-	\$2,000,000.00
Assets, over	-	3,546,000.00
Annual Income	-	3,678,000.00

HON. GEO. A. COX, President.

J. J. KENNY, Vice-President and Man. Director.

C. C. FOSTER, Secretary.

Money

CAN BE SAVED BY MEANS
OF AN ENDOWMENT POLICY.

**YOU CAN ONLY SECURE
SUCH A POLICY WHILE YOU
ARE IN GOOD HEALTH.**

Pamphlets and Full Particulars regarding the
New Accumulation Endowment Policy
sent on application.

Confederation Life ASSOCIATION.

W. H. BEATTY, PRESIDENT.

W. C. MACDONALD,
ACTUARY.

J. K. MACDONALD,
MANAGING DIRECTOR.

HEAD OFFICE, - TORONTO, CANADA.

MANUFACTURERS AND MERCHANTS.

It may be necessary for your staff to have fidelity
bonds. We act as surety on such. We are known the
world over.

Write to us for terms and particulars.

The London Guarantee & Accident Co., Limited,

D. W. ALEXANDER, General Manager for Canada,
Canada Life Building, - - - TORONTO.

BRITISH AMERICA ASSURANCE COMP'Y

FIRE AND MARINE.

Incorporated 1833

CASH CAPITAL, \$1,000,000.00.

TOTAL ASSETS, \$2,024,096.02.

LOSSES PAID SINCE ORGANIZATION, \$23,886,005.32.

HEAD OFFICE, - BRITISH AMERICA BUILDING,
Cor. Front and Scott Sts., Toronto.

HON. GEO. A. COX, President.

J. J. KENNY, Vice-President
and Managing Director

P. H. SIMS, Secretary.

THE CANADIAN BANK OF COMMERCE

Paid-up Capital, - - - \$8,700,000
Rest, - - - \$3,000,000

HON. GEO. A. COX, President. B. E. WALKER, General Manager.

HEAD OFFICE: TORONTO, CANADA.

LONDON, ENGL., OFFICE.
60 Lombard St., E.C.

NEW YORK AGENCY,
16 Exchange Place.

The attention of exporters and importers is requested to the undernoted list of correspondents of this bank, embracing all parts of the world. In conjunction with its widespread system of branches, numbering 112 and covering all important points in Canada and on the Pacific coast of the United States, it is thus enabled to offer them unexcelled facilities for the transaction of domestic or foreign banking business.

List of Bankers and Chief Correspondents:

GREAT BRITAIN—

The Bank of England; The Bank of Scotland; Lloyds Bank Limited; The Union of London and Smiths Bank, Limited; Parr's Bank, Limited.

UNITED STATES—

New York, The American Exchange National Bank, The Fourth National Bank; Boston, The Bank of Nova Scotia, The National Shawmut Bank, The National Suffolk Bank; Buffalo, The Marine National Bank; Chicago, The Northern Trust Company; Detroit, The People's Savings Bank; The Commercial National Bank; Minneapolis, The North-Western National Bank; New Orleans, The Commercial National Bank.

FRANCE—

Credit Lyonnais, Paris; Messrs. Lazard Freres & Cie, Paris.

GERMANY—

Deutsche Bank.

HOLLAND—

Disconto Maatschappij, Rotterdam.

BELGIUM—

Messrs. J. Matthieu & Fils, Brussels; Banque d'Anvers, Antwerp.

SWITZERLAND—

La Banque Federale, Zurich.

Foreign Exchange Bought and Sold.

INDIA, CHINA, JAPAN and the PHILIPPINE ISLANDS—

Chartered Bank of India, Australia and China; Hongkong and Shanghai Banking Corporation.

SOUTH AFRICA—

Standard Bank of South Africa, Limited; Bank of Africa, Limited.

AUSTRALIA and NEW ZEALAND—

Union Bank of Australia, Limited; Bank of Australasia; National Bank of Australasia, Limited.

HAWAIIAN ISLANDS—

First National Bank of Hawaii, Honolulu; Bishop & Co., Honolulu.

SOUTH AMERICA—

British Bank of South America, Limited; London & Brazilian Bank, Limited; Bank of Tarapaca and Argentina, Limited.

MEXICO—

Banco de Londres y Mexico.

WEST INDIES—

Bank of Nova Scotia, Kingston, Jamaica; Colonial Bank and Branches; National Bank of Cuba, Havana, Cuba; Bank of Bermuda, Hamilton, Bermuda.

Commercial Letters of Credit Issued.

CAPITAL PAID UP, - - \$1,000,000.
RESERVE FUND, - - 1,000,000.

THE METROPOLITAN BANK.

DIRECTORS

R. H. WARDEN, D.D., President S. J. MOORE, Esq., Vice-President
D. E. THOMPSON, Esq., K.C. His Honor W. MORTIMER CLARK, K.C.
THOS. BRADSHAW, Esq.

HEAD OFFICE, - TORONTO.

W. D. ROSS, GENERAL MANAGER.

GENERAL
BANKING
BUSINESS
TRANSACTION

SAVINGS DEPARTMENT

at all Branches.

ACCOUNTS SOLICITED

Drafts Bought and Sold.
Letters of Credit Issued.

Everything counts, and the

POINTS IN FAVOR OF OUR GOODS

are many

Ready Roofing, Sheathing and Black  Diamond Tarred Felts,
Building Papers, Fibre and Manilla Wrappings, etc.

Ask for our quotations—they will interest you.

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLIETTE, QUE.

ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET,

MONTREAL

CURRENT MARKET QUOTATIONS.

Jan. 14, 1905.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.**TIN.**

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$32 00 \$33 00

TINPLATES.

Charcoal Plates—Bright.
A.I.S., equal to Bradley— Per box.
I.C., usual sizes. \$6 50
I.X. " " 8 00
I.X.X. " " 9 50
Famous, equal to Bradley—
I.C. 6 75
I.X. 8 25
I.X.X. 9 75

Raven and Vulture Grades—
I.C., usual sizes. 4 25
I.X. 5 00
I.X.X. 5 75
I.X.X.X. 6 50

"Dominion Crown Best"—Double
Coated, Tissue. Per box.
I.C. 5 50
I.X. 6 50
I.X.X. 7 50

Allaway's Best—Standard Quality.
I.C. 4 50
I.X. 5 50
I.X.X. 6 50

Coke Plates—Bright.
Bessemer Steel—
I.C., usual size, 14x20 3 40
I.C., special sizes, base 3 70
20x28 7 50

Charcoal Plates—Terne
Dean or J. G. Grade—
I.C., 20x28, 112 sheets 7 50
I.X., Terne Tin 10 50

Charcoal Tin Roiler Plates.
Cookley Grade—
X X, 14x56, 50 sheet box. }
14x60, " } 7 00
14x65, " }

Tinned Sheets.
72x30 up to 24 gauge. 7 25 7 50
26 7 75 8 00

IRON AND STEEL.

Montreal, Toronto
Common bar, per 100 lb. 1 77 1 80
Refined 2 02 2 05
Horseshoe Iron 2 02
Hoop steel, 1 1/2 to 3-in. base 1 82
Sleigh shoe steel, 1 92
T. Firth & Son's tool steel—
Speedicut 0 60
Annealed speedicut 0 65
Self hardening 0 35
Best tool steel 0 12
Warranted 0 09
Best sheet steel 0 12

B. K. Morton & Co.—
"Alpha" high speed 0 65
" " annealed 0 70
"M" Self-Hardening 0 50
" " standard 0 14
" " 0 09
Onas & Colver's tool steel 0 10
" " "Novo" 0 65
" " annealed 0 70
Chas. Leonard 0 08
Crucible Steel Co.
" Rex high speed steel 0 65
" Self Hardening 0 45

Crucible Special. 0 17
" Silver steel. 0 13
" Black Diamond. 0 10
Sanderson's Crucible steel. 0 09
Superior 0 12

RABBIT METAL.**Syracuse Smelting Works:**

Aluminum, genuine. 0 45
Government, " 0 44
Tough, " 0 40
Hard, " 0 40
Dynamo. 0 30
Special. 0 25
Harmony. 0 22
Car Box. 0 20
Extra. 0 15

The Canada Metal Co.:

Imperial, genuine. 0 40
Metallic. 0 30
Hercules. 0 20
Star. 0 15
No. 1. 0 12
No. 2. 0 10
No. 3. 0 06
No. 4. 0 05

BLACK SHEETS.

Montreal, Toronto
10 gauge. 2 30 2 30
12 and 14 gauge. 2 30 2 35
17 " 2 30 2 40
22 to 24 gauge. 2 35 2 50
26 " 2 40 2 65
28 " 2 40 2 70

COPPER WIRE.

Discount, 50 per cent.
CANADA PLATES.
Ordinary. Dom.
All bright. Crown.
Galvanized Canada Plates—

18x24x52 4 25 4 35
60 4 60
20x28x60 8 50 9 20
94 9 00

GALVANIZED SHEETS.

Queen's
Fleur-de-Lis, Gordon Crown, Comet Bell, Head
16 gauge. 3 50 3 50
18 to 24 gauge. 3 50 3 50
26 " 3 75 3 90
28 " 4 00 4 05
American brands, \$4.00 for 104 oz.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof, coil, 3-16 in., per 100 lb. 7 00
" 5-16 " 5 60
" 7-16 " 4 45
" 9-16 " 3 85
" " 3 55
" " 3 35
" " 3 25

Halter, kennel and post chains, 40 to 40 and
5 per cent.
Cow ties 40 p.c.
Tie out chains 65 p.c.
Stall fixtures 35 p.c.
Trace chain 45 p.c.
Jack chain, iron, single and double, discount
35 p.c. (count 40 p.c.)
Jack chain, brass, single and double, dis-

COPPER.

Ingot. Per 100 lb.
Casting, car lots. 15 50
Bars.
Cut lengths, round, 1/2 to 1 in. 21 00 23 00
round and square,
1 to 2 inches. 21 23 00
Sheet.
Plain, 16 oz., 14x48 and 14x60 20 00
Plain, 14 oz. 21 00
Tinned copper sheet. 24 00
Planished 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 0 21
" 50-lb. and above 0 20

BOILER AND T.K. PITTS.

Plain tinned. 40 per cent. off list.
Spun. 0 23 1/2

BRASS.
Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4 0 23
Tubing, base, per lb. 0 23 1/2

ZINC SPelter.
Foreign, per 100 lb. 6 25 6 50
Domestic " 5 50 5 75

ZINC SHEET.
5-cwt. casks 7 00
Part casks. 7 50

LEAD.
Imported Pig, per 100 lb. 3 60
Bar, per lb. 0 05
Sheets, 2 1/2 lb. sq. ft., by roll 0 06 1/2
Sheets, 3 to 6 lb. 0 06
NOTE.—Cut sheets 1c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.
Cookson's. per lb. 0 10 1/2 0 11

SHOT.
Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count, 15 p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 2 p.c. for cash in thirty days.

PLUMBING GOODS.

BATH TUBS.
Zinc 6 00
Copper, discount 20 per cent. off revised list.

BATHS.
Standard Ideal Enameled.
5-ft. 2 1/2 in. rolled rim, 1st quality. 21 25
5 3 " 2nd " 17 25
5 3 " 1st " 23 60
5 3 " 2nd " 19 00
5 2 1/2 " 1st " 18 40
5 " 2nd " 17 25
5 3 " 1st " 20 75
5 " 2nd " 17 25
Plate 116 D, lavatories 1st quality. 8 90
" 116 D, " 2nd " 7 50
" 118 D, " 1st " 5 70
" 118 D, " 2nd " 4 80
" 120 D, " 1st " 5 60
" 120 D, " 2nd " 4 70
" 122 D, " 1st " 5 40
" 122 D, " 2nd " 4 50
Sinks 18 x 30 in. flat rim. 2 50

CLOSETS.
Fittings 1 00
Plain Simplex Syphon Jet 9 00
Emb. 9 50
Fittings 1 25
Low Down Elgin or Teutonic, plain. 6 00
Connection 6 50
Plain Richelieu 1 25
Emb. 4 50
Connections 1 25
Basins, P.O., 14-in. 0 63
Basins, oval, 17 x 14-in. 1 50
Basins, " 19 x 15-in. 2 00

IRON PIPE.
Black pipe— Per 100 feet.
1/2 inch 2 03
" 3/4 " 2 14
" 1 " 2 29
" 1 1/4 " 2 87
" 1 1/2 " 4 12
" 2 " 5 62
" 2 1/2 " 6 75
" 3 " 9 00

Galvanized pipe—
1/2 inch 2 86
" 3/4 " 2 96
" 1 " 3 14
" 1 1/4 " 4 02
" 1 1/2 " 6 77
" 2 " 7 87
" 2 1/2 " 9 45
" 3 " 12 60

Malleable Fittings—Canadian discount 20 per
cent.; American discount 35 per cent.

Cast Iron Fittings—Standard bushings 65
per cent.; headers, 60; flanged unions,
lipped, 60; malleable bushings, 57 1/2; nipples,
up to 6 in., 70 and 5.

PLUMBERS' BRASS GOODS.

Standard Compression work, dia. 50 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra dis-
count 10 per cent.
Lever handle Stops and Waste, discount 60
per cent. With in lots of 2 dozen and over
an extra discount of 10 per cent.
J.M.T. Globe, Angle and Check Valves, dis-
count 55 per cent.
Standard Globe, Angle and Check Valves,
discount 65 per cent.

Kerr's special standard globes and angles
discount 55 per cent.

Kerr's Jenkin disc, copper-alloy disc and
heavy standard valves, discount 55 per cent.
Kerr's standard brass checks, discount 55 p.c.
Kerr's standard brass disc steam radiator
valves, discount 65 per cent.
Kerr's Jenkin disc, copper-alloy disc radi-
ator valves, discount 65 per cent.
Kerr's quick-opening hot-water radiator
valves, discount 65 per cent.
Weber's (Kerr) patent straightway gate
valves, brass, discount 50 per cent.
Weber's (Kerr) patent straightway gate
valves, I.B.B.M., discount 60 and 10 per cent.
J.M.T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 65 per
cent.

Patent Quick-Opening Valves, discount 70
per cent.

No. 1 compression bath cock. net 1 75
No. 4 " 1 90
No. 7 Fuller's " 2 10
No. 4 1/2 " 2 25

Patent Compression Cushion, basin
cock, hot and cold, per doz., \$31; 5 and 10
per cent. discount.
Patent Compression Cushion, bath
cock, No. 2208. 2 25
Square head brass cocks, discount 55 per cent
iron " 50 to 60
Thompson Smoke-test Machine \$25.00

RANGE BOILERS.

Copper, 30 gallon. " 22 00
" 35 " 24 00
" 40 " 24 00
Discount off copper boilers 15 per cent.

GALVANIZED IRON RANGE BOILERS.

Capacity. Standard. Extra heavy
Gals. Gals. Gals.
12 4.50 6.50
18 4.75 6.75
24 4.75 6.75
30 5.00 7.50
35 6.00 8.25
40 7.00 9.50
52 11.00 14.00
66 18.00 20.00
82 21.00 24.00
100 22.00 26.00
120 34.00 40.00
144 47.00 55.00

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE CALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

SOIL PIPE AND FITTINGS.
Med. and Extra heavy pipe and fittings, dia. 60 per cent.
7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER. Per lb
Bar, half-and-half, guaranteed 0 17 1/2
Wiping 0 15 1/2
Refined 0 16 1/2

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb. 0 08
Chrome yellow 0 15
Golden ochre 0 08
French 0 06
Marine black 0 04
Chrome green 0 10
French permanent green 0 13
Signwriters' black 0 15

WHITE LEAD.

Per 100 lb.
Pure 4 75
No. 1 4 50
No. 2 4 25
No. 3 3 75
No. 4 3 50
Munro's Select Flake White 4 75
Elephant and Decorators' Pure 4 75
Monarch 5 00
Decorators' Pure 4 75
Essex Genuine 4 25
Sterling Pure 5 00
Island City Pure 5 00
Ramsey's Pure Lead 4 75
Ramsey's Exterior 4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt \$4 25 \$4 50
Genuine, 100 lb. kegs, " 4 75
No. 1, 560 lb. casks, per cwt 4 00
No. 1, 100 lb. kegs, per cwt 4 25

WHITE ZINC.

Extra Red Seal 0 06
French V. M. 0 06
Lehigh 0 06

DRY WHITE LEAD.

Pure, casks 4 25
Pure, kegs 4 50
No. 1, casks 4 00
No. 1, kegs 4 25

PREPARED PAINTS.

In 1/2, 1 and 1-gallon tins.

Pure, per gallon 1 20
Second qualities, per gallon 1 00
Barn (in bbls.) 0 60
The Sherwin-Williams paints 1 35
Canada Paint Co.'s pure 1 25
Toronto Lead & Color Co.'s pure 1 25
Anderson Peary's pure 1 20
Standard Co.'s "New Era" 1 30
"Globe" barn 60
Francois-Frost Co.'s "Ark" B'd 1 25
"British Navy deck 1 50
Henderson & Potts's "Anchor" 1 35
Ramsey's paints, Pure, per gal. 1 20
"Outside, bbls 0 55
" " " 1 00
Island City House Paint 1 25
" " " 1 25
Sterling House Paint 1 20
" " " 1 10
National 1 06

PARIS GREEN.

BERGERS' ENGLISH.

Petroleum, barrels, per lb. 0 15 1/2
Arsenic, kegs 0 15 1/2
50 and 100-lb. drums 0 16
25-lb. drums 0 16 1/2
1-lb. paper boxes 0 17
1-lb. tin 0 18
1-lb. paper boxes 0 19
1-lb. tin 0 20
Terms—2 per cent. off 30 days, or 90 days net.

PUTTY.

Bulk in bbls. 1 45
Bulk in less quantity 1 70
Bladders in bbls. 1 50
Bladders in kegs, boxes or loose 1 85
25-lb. tins 1 80
12 1/2 lb. tins 2 05
Bladders in bulk or tins less than 100 lb. 1 85

VARNISHES.

In 5-gal. lots. Per gal. Net.

Carriage, No. 1 1 50
Pale durable body 4 10
" rubbing 2 85
Gold size, japan 1 50
No. 1 brown japan 0 85
Elastic oak 1 10
Furniture, extra 1 10
" No. 1 0 90
Hard oil finish 1 35
Light oil finish 1 60
Damar 1 75
Shellac, white 2 40
" orange 2 30
Furpentine, brown japan 1 10
" black japan 1 10
" No. 1 0 85
Elastilite varnish, 1 gal. can, each 2 00
Granitine floor finish, per gal 2 75
Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each.
Sherwin-Williams' kopal varnish, assorted case, from 1 gal., \$2.50.

GLUE.

Common 0 08
French medal 0 10
White, extra 0 18
Gelatin 0 18
Strip 0 18
Coopers 0 19
Huttner 0 12
Ground 0 16
Cologne, genuine 0 08

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Cape Dominion, 50 and 5 and 25 per cent. American \$2.00 per 1000.
C. B. Cape American, \$2.60 per 1000.
Rim Fire Pistol, discount 30 p.c., American.
Rim Fire Cartridges, Dominion, 50 and 5 p.c. Central Fire, Military and Sporting, American, add 20 per cent. to list. B.B. Caps, discount 40 per cent., American.
Central Fire Pistol and Rifle, list net Amer.
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent. American
10 per cent. advance on list.
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.
American 20 per cent. discount. Rival and Nitro, 10 per cent. advance on list.
Brass Shot Shells, 55 per cent.
Primers, Dom., 30 per cent.; American, \$1.75 per lb.

Wads.

Best thick brown or grey felt wads, in 1-lb. bags \$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges 0 99
Best thick white card wads, in boxes of 500 each, 10 gauge 0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges 0 20
Thin card wads, in boxes of 1,000 each, 10 gauge 0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—Per M.
11 and smaller gauge 0 60
9 and 10 gauges 0 70
7 and 8 " 0 90
5 and 6 " 1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—
11 and smaller gauge 1 15
9 and 10 gauges 1 40
7 and 8 " 1 45
5 and 6 " 1 90

ADZES.

Discount 20 per cent.

Wright's, 80-lb. and over 0 10 1/2
Hay Budden, 80-lb. and over 0 09 1/2
Brook's, 80-lb. and over 0 11 1/2

Woodyatt Hudson, per doz., net 4 50

Gilmour's, discount 65 and 5 per cent. off list.

Chopping Axes

Single bit, per doz. 7 00
Double bit, " 10 00
Bench Axes, 40 per cent.
Broad Axes, 25 per cent. 5 50
Boys' Axes 6 25
Splitting Axes 7 00
Handled Axes 10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys', handled. 5 75

Underhill American Bench Axes, 40 p.c. hunters. 5 25

AXLE GREASE.

Ordinary, per gross 6 00

Best quality 10 00

BELLS.

Hand.

Brass, 60 per cent.

Nickel, 55 per cent.

American make, discount 63 1/2 per cent.

Canadian, discount 45 and 50 per cent.

Door.

Gongs, Barrant's 5 50

Peterboro', discount 50 and 10 per cent. off new list.

FARM.

American, each 1 35

House. 0 35

American, per lb. 0 40

BELTING.

Extra, 60 per cent.

Standard, 60 and 10 per cent.

No. 1, not wider than 6 in., 60, 10 and 10 per cent.

Agricultural, not wider than 4 in., 75 per cent.

Bits.

Auger.

Gilmour's, discount 60 per cent.

Rockford, discount 50 and 10 per cent.

Jennings' Gen., net list.

Car.

Gilmour's, 4 1/2 per cent.

Clark's, 40 per cent.

Clark's, per doz 0 65

Diamond, Shell, per doz. 1 00

Nail and Spike, per gross 2 25

BLIND AND RED STAPLES.

All sizes, per lb. 0 07 1/2

BOLTS AND NUTS

Carriage Bolts, common (\$1 list) Per cent.

" 3-16 and 1/2 60

" 5-16 and 1/2 55

" 7-16 and up 55

" full sq. (\$2.40 list) 60

" Norway Iron (\$3 list) 60

Machine Bolts, all sizes, 1/2 and less 60

Machine Bolts, 7-16 and up 60

Plough Bolts 55

Blank Bolts 55

Bolt Ends 55

Sleigh Shoe Bolts 70

Coach Screws, cone point 70

Nuts, square, all sizes, 4c. per lb. off.

Nuts, hexagon, all sizes, 4c. per lb. off.

Store Rods per lb., 5 1/2 to 6c.

BOOT CALKS.

Small and medium, ball per M. 4 25

Small heel 4 50

BRIGHT WIRE GOODS.

Discount 62 1/2 per cent.

BUTCHERS' CLEAVERS.

German per doz. 6 00

American 12 00

BUTCHER KNIVES.

Railley's per doz. 0 60

7 00

BUILDING PAPER, ETC

Tarred Felt, per 100 lb. 1 85
Ready roofing, 2-ply, not under 45 lb. per roll 0 90
Ready roofing, 3-ply, not under 65 lb. per roll 1 15
Carpet Felt per ton 45 00
Heavy Straw Sheathing per ton 35 00
Dry Sheathing per roll, 400 sq. ft. 0 40
Tar 400 " 0 50
Dry Fibre 400 " 0 55
Tarred Fibre 400 " 0 65
O. K. & I. K. L. 400 " 0 70
Resin-sized 400 " 0 45
Oiled Sheathing 600 " 1 00
Oiled 400 " 0 70
Roof Coating, in barrels, per gal. 0 17
Roof " small packages " 0 25
Refined Tar per barrel 5 00
Coal Tar 4 00
Coal Tar, less than barrels, per gal. 0 15
Roofing Pitch per 100 lb. 1 00
Slater's felt per roll 0 60

BULL RINGS.

Copper, \$2.00 for 2 1/2-inch, and \$1.90 or 2-inch.

BUTTS.

Cast Iron.

Loose Pin, discount 60 per cent

Wrought Steel.

Fast Joint, discount 70 to 70 and 5 per cent.

Loose Pin, discount 70 to 70 and 5 per cent.

CARPET STRETCHERS.

American per doz. 1 00

Bullard's 1 50

6 50

CASTORS.

Bed, new list, discount 55 to 57 1/2 per cent.

Plate, discount 52 1/2 to 57 1/2 per cent.

CATTLE LEADERS.

Nos. 32 and 33 per gross 7 50

8 50

CHALK.

Carpenters' Colored, per gross 0 45

White lump per cwt. 0 60

Red 0 05

Crayon per gross 0 14

0 18

CHISELS.

Socket, Framing and Firmer.

Broad's, discount 60 and 10 per cent.

Warnock's, discount 50 and 10 per cent.

P. S. & W. Extra, discount 60 and 10 per cent.

FOODS—STOCK.

Colonial Stock Foods, 50c. packages, per doz \$4 00

" " " 25c. pkgs., " 2 00

" " " 10c. " 75

" " " 25-lb. pail, each 1 80

Poultry Foods, 25c. packages 1 25

Cough Powders, per doz. 1 25

Worm 1 25

International Stock Foods, \$1 packages, per doz. 8 00

International Stock Foods, per pail 2 75

" Poultry " \$1 pkgs. per doz. 8 00

" Worm Powders, 50c. pkgs. 4 00

" Pine Healing Oil, per doz. 8 00

" Pheno-Chloro, \$1 pkgs., per doz. 8 00

" Hoof Ointment 8 00

" Compound Absorbent 16 00

Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz

CLOTHES REELS.

Davis Clothes Reels, dis. 40 per cent

An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

CONDUCTOR PIPE.			GAUGES.			Clothes line, No. 61..			Cabinet.				
Plain or Corrugated.			Marking, Mortise, Etc.			Harness.....			Eagle, discount 30 per cent.				
2-inch.....	per 100 feet	3 00	Stanley's, discount 50 to 55 per cent.			Hat and coat.....			English and Am.....				
3 ".....	"	4 00	Wire Gauges.			Chandelier.....			Eagle, discount 30 to 25 per cent.				
4 ".....	"	5 25	Winn's, Nos. 26 to 33.....			Wrought Iron.			MACHINE SCREWS.				
5 ".....	"	6 75	GILLET'S POWDERED LYE.			Screw, bright, discount 60 per cent.			Flat head, discount 25 per cent.				
6 ".....	"	9 00	1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.			Wire.			Round head, discount 20 per cent.				
CRADLES, GRAIN.			HALTERS.			Horse Nails.			MALLET.				
Canadian, discount 20 to 25 per cent.			Rope, 1/2-inch.....			"P.B." Brand, 55 to 60 per cent.			Tin Smith's.....				
CROSSCUT SAW HANDLES.			Rope, 3/4-inch.....			"C" brand, 40, 10 and 7 1/2 per cent. off list			Carpenters', hickory.....				
S. & D., No. 3.....	per pair	0 17 1/2	Rope, 1 to 2-inch.....			"M" brand, 55, per cent.			Lignum Vitae.....				
S. & D., " 5.....	"	0 22 1/2	Leather, 1-inch.....			"Monarch", 50 and 7 1/2 per cent.			Caulking, each.....				
S. & D., " 6.....	"	0 15	Web.....			"Peerless" 50 per cent. dis.			MATTOCKS.				
Boynton pattern.....	"	0 20	HAMMERS.			HORSESHOES.			Canadian.....				
DOOR SPRINGS.			Nail.			F.O.B. Montreal			MEAT CUTTERS.				
Torrey's Rod.....	per doz.	1 85	Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27 1/2 per cent.			"P.B." brand, new pattern, base.....			American, discount 3 1/2 per cent.				
Coil, 1/2 to 1 1/2 in.....	"	0 95	Tack.			"M." brand, base.....			German, 15 per cent.				
English.....	"	2 00	Magnetic.....			Add 15c. Toronto, Hamilton, Guelph.			Gem.....				
DRAW KNIVES.			Canadian.....			JAPANNED WARE.			MILK CAN TRIMMING.				
Coach and Wagon, discount 50 per cent.			English and Canadian, per lb. 0 22 1/2 0 25			50 per cent.			Discount 25 per cent.				
Carpenters' discount 60 and 10 per cent.			HANDLES.			PICKS.			NAILS.				
DRILLS.			Axe, 2nd growth, per doz. net			Star.....							
Hand and Breast.			Store door.....			Brass spun 7 1/2 per cent. discount off new list.							
Miller's Falls, per doz., net list.			Fork.			Copper.....			Cut.				
DRILL BITS.			C. & B., discount 40 per cent., revised list.			American, 60 and 10 to 65 and 5 per cent.							
Morse, discount 37 1/2 to 40 per cent.			Hoe.			KEYS.			Wire nails in carlots 5c. less.				
Standard, discount 50 and 5 to 55 per cent.			Saw.			Lock, Canadian dis. 40 to 40 and 10 per cent.			Wire nails in carlots are \$2.20 (base).				
FAUCETS.			American.....			Cabinet, trunk and padlock,							
Common, cork-lined, discount 35 per cent.			Plane.			American.....			Steel cut nails 10c. extra.				
EAVETROUGHS.			American.....			Miscellaneous wire nails, discount 75 per cent.							
10-inch.....	per 100 ft.	10 00	Hammer and Hatchet.			Door, japanned and N.P., per doz.			Coopers' nails, discount 30 per cent.				
ELBOWS (stovepipe.)			Canadian, discount 40 per cent.			Bronze, Berlin.....			NAIL PULLERS.				
5 and 6-inch, common.....	per doz.	1 20	HANGERS.			Shutter, porcelain, F. & L.			German and American.....				
7-inch.....	"	1 35	Steel barn door.....			screw.....			NAIL SETS.				
Polished, 15c. per dozen extra.			Stearns, 4-inch.....			White door knobs.....			Square, round and octagon,				
ESCUTCHEONS.			Zenith.....			per gross.....							
Discount 50 and 10 per cent., new list			Lane's covered.....			Net prices.			Diamond.....				
ESCUTCHEON PINS.			No. 11, 5-foot run.....			LAMP WICKS.							
Iron, discount 40 per cent.			No. 11 1/2, 10-foot run.....			Discount, 60 per cent.			POULTRY NETTING.				
FACTORY MILK CANS.			No. 12, 10-foot run.....			LADDERS, EXTENSION.			2-in. Mesh, 19 w.g., dis. 60 per cent.				
Discount off revised list, 40 per cent.			No. 14, 15-foot run.....			Waggoner Extension Ladders, dis. 40 per cent.			2-in. Mesh 16 w.g. and heavier, 50 p.c.				
FILES AND RASPS.			Steel, covered.....			OAKUM.			U. S. Navy.....				
Great Western.....	70 and 10 per cent.		1 1/2 x 3-16 in (100 ft)			LANTERNS.			Plumbers.....				
Arcade.....	70 " 10 "		" track, 1 x 3-16 in (100 ft)			Cold Blast.....			OILERS.				
Kearney & Foot.....	70 " 10 "		" 1 1/2 x 3-16 in (100 ft)			No. 3, "Wright's".....			McClary's Model galvanized				
Dixon.....	70 " 10 "		" 1 1/2 x 3-16 in (100 ft)			Ordinary, with O burner.....			oil can, with pump, 5 gallon,				
American.....	70 " 10 "		" 1 1/2 x 3-16 in (100 ft)			Dashboard, cold blast.....			per dozen.....				
J. Barton Smith.....	70 " 10 "		" 1 1/2 x 3-16 in (100 ft)			No. 0.....			Davidson oilers, discount 40 per cent.				
McClellan.....	70 " 10 "		" 1 1/2 x 3-16 in (100 ft)			Japanning, 50c. per doz. extra.			Zinc and tin, discount 50, 50 and 10 per cent.				
Eagle.....	70 " 10 "		" 1 1/2 x 3-16 in (100 ft)			LEMON SQUEEZERS.			Copper.....				
Nicholson, 60 and 10 to 60, 10 and 5			" 1 1/2 x 3-16 in (100 ft)			Porcelain lined.....			Brass.....				
Royal.....	80		" 1 1/2 x 3-16 in (100 ft)			Galvanized.....			Malleable, discount 25 per cent.				
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Black Diamond, 60 and 10 to 60, 10 and 5 per cent.			" 1 1/2 x 3-16 in (100 ft)			King, glass.....			Dufferin pattern pails, discount 47 1/2 per cent.				
Jowitt's, English list, 25 to 27 1/2 per cent.			" 1 1/2 x 3-16 in (100 ft)			All glass.....			Flaring pattern, discount 47 1/2 per cent.				
GLASS.			" 1 1/2 x 3-16 in (100 ft)			LAWN MOWERS FOR 1905.			Galvanized washtubs, discount 47 1/2 per cent.				
Window. Box Price.			" 1 1/2 x 3-16 in (100 ft)			Woodyatt, 10 1/2-in., 14-in. cut			PIECED WARE.				
Size United	Per	D. Diamond	" 1 1/2 x 3-16 in (100 ft)			Star.....			Discount 40 per cent. off list, June, 1899.				
Inches.	50 ft.	100 ft.	" 1 1/2 x 3-16 in (100 ft)			9-in. ".....			10-qt. flaring sap buckets, discount 40 per cent.				
Under 26.....	3 80	5 06	" 1 1/2 x 3-16 in (100 ft)			Daisy.....			6, 10 and 14-qt. flaring pails, dis. 40 per cent.				
26 to 40.....	4 00	5 44	" 1 1/2 x 3-16 in (100 ft)			Philadelphia, 7 1/2-in.			Creamer cans, discount 40 per cent.				
40 to 50.....	4 50	6 56	" 1 1/2 x 3-16 in (100 ft)			Woodyatt, 10 1/2-in., ball bearing			PICKS.				
50 to 60.....	4 75	7 50	" 1 1/2 x 3-16 in (100 ft)			Grass Boxes.....			Per dozen.....				
60 to 70.....	5 00	8 62	" 1 1/2 x 3-16 in (100 ft)			King Edw'd, 12-in., 14-in. cut			6 00 9 00				
70 to 80.....	5 30	9 38	" 1 1/2 x 3-16 in (100 ft)			Discount 50 per cent.			PICTURE NAILS.				
80 to 90.....	5 50	10 75	" 1 1/2 x 3-16 in (100 ft)			CANADIAN. 50 to 50 and 10 per cent.			Porcelain head.....				
90 to 95.....	5 75	12 30	" 1 1/2 x 3-16 in (100 ft)			Russell & Erwin.....			per gross.....				
95 to 100.....	6 00	15 00	" 1 1/2 x 3-16 in (100 ft)			HOLLOW WARE.			1 35 1 50				
96 to 100.....	6 25	18 00	" 1 1/2 x 3-16 in (100 ft)			Cast Iron.			40 40 1 00				
96 to 100.....	6 50	18 00	" 1 1/2 x 3-16 in (100 ft)			Bird sage.....			PICTURE WIRE.				
			" 1 1/2 x 3-1										

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Screw " 0 27 1 00

Awning " 0 35 2 50

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Canadian cistern 1 80 3 60

Canadian pitcher spout 1 40 2 10

PUNCHES.

Saddler's per doz. 1 00 1 85

Conductor's " 3 00 15 00

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" hollow per inch 1 00

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Wood per doz. net 1 20 up.

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Iron Rivets, black and tinned, 60 and 10 p a.

Iron Burrs, discount 60 and 10 per cent.

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Copper Burrs only, discount 30 and 10 per cent.

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packages 1c. per lb.; 1-lb. packages 2c. lb.

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1 inch 0 25 0 26

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Jute 0 09

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Sisal bed cord, 48 feet per doz. 0 65

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"72 feet 0 95

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Boxwood, discount 70 per cent.

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Emery, discount 40 per cent.

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on list.

SAP SPOUTS.

Bronzed iron with hooks per 1,000 7 50

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SAWS.

Hand, Diaston's, discount 12½ per cent

S. & D., discount 40 per cent.

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S. & D., discount 35 per cent. on Nos. 2 and 3.

Hack, complete each 0 75 2 75

"frame only each 0 50 1 25

SASH WEIGHTS.

Sectional per 100 lb. 2 00 2 25

Solid " 1 50 1 75

SASH CORD.

Per lb. 0 28 0 30

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X-Cut Sets, 7 50

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Gurney Standard, 40 per cent.

Gurney Champion, 50 per cent.

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Fairbanks standard, discount 35 per cent.

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"Richelieu, discount 55 per cent.

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"Champion, discount 50 per cent.

"Weighbeams, discount 35 per cent.

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Sargent's per doz. 0 65 1 00

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Common doors, 2 or 3 panel, walnut

stained, 4-in. style per doz. 6 50

Common doors, 2 or 3 panel, yellow and

green stained, 4-in. style per doz. 6 75

Common doors, 2 or 3 panel, in natural

colors, oil finish per doz. 8 75

3-in. style 20c. per dozen less.

SCREWS.

Wood, F. H., bright and steel, discount 87½

per cent.

Wood, R. H., bright, dis. 82½ per cent.

"F. H., brass, dis. 80 per cent.

"R. H., dis. 75 per cent.

"F. H., bronze, dis. 75 per cent.

"R. H., dis. 70 per cent.

Brace Screws, dis. 87½ per cent.

Brace, wood per doz. 3 25 4 00

"iron 4 25 5 00

Set, case hardened, dis. 60 per cent.

Square Cap, dis. 50 and 5 per cent.

Hexagon Cap, dis. 45 per cent.

SCYTHES.

Per doz. net 6 00 9 00

SCYTHE SNATHS.

Canadian, discount 40 per cent.

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Clausen, nickel, discount 80 per cent.

Clausen, Japan, discount 67½ per cent.

Clausen, tailors, discount 40 per cent.

Seymour's, discount 50 and 10 per cent.

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Canadian, discount 45 per cent.

HINKS.

Cast iron, 18 x 24 0 85

"18 x 30 1 00

"18 x 36 1 40

SNAPS.

Harness, German, discount 25 per cent.

Lock, Andrews' 4 50 11 50

SOLDERING IRONS.

1, 1½-lb. per lb. 0 37

2-lb. or over 0 34

SQUARES.

Iron, No. 492 per doz. 1 90 2 25

"No. 493 2 40 2 55

"No. 494 3 25 3 40

Steel, discount 60 and 5 to 65 per cent.

Try and Bevel, discount 50 to 52½ per cent.

STAMPED WARE.

Plain, discount 75 and 12½ per cent. off re-

vised list.

Retinned, discount 75 per cent. off revised list.

STAPLES.

Galvanized 3 00

Plain 2 80

Coopers', discount 45 per cent.

Foultry netting staples, discount 40 per cent.

STOCKS AND DIES.

American discount 25 per cent.

STONE.

Washita per lb. 0 28 0 60

Hindostan " 0 06 0 07

"slip " 0 09 0 08

Labrador " 0 13 0 13

"Axe " 0 15 0 15

Turkey " 0 50 0 50

Arkansas " 1 50 1 50

Water-of-Ayr " 0 10 0 10

Scythe per gross 3 50 5 00

Grind, 40 to 200 lb., per ton 25 00

"under 40 lb. 28 00

"200 lb. and over 31 00

STOVEPIPES.

5 and 6 inch, per 100 lengths 7 00

7 inch 7 50

TACKS, BRADS, ETC.

Carpet tacks, blued 80 and 15

"tinned 80 and 20

" (in kegs) 49

Cut tacks, blued, in dozens only 80

"weights 60

Swedes cut tacks, blued and tinned—

In bulk 80 and 10

In dozens 75

Swedes, upholsterers', bulk 85, 12½ and 12½

brush, blued and tinned

bulk 70

Swedes, gimp, blued, tinned and

japaned 75 and 12½

Zinc tacks 35

Leather carpet tacks 55

Copper tacks 50

Copper nails 52½

Trunk nails, black 65 and 5

Trunk nails, tinned 65 and 10

Clout nails, blued 65 and 5

Chair nails 35

Patent brads 40

Fine finishing 40

Lining tacks, in papers 10

"in bulk 15

"solid heads, in bulk 75

Saddle nail, in papers 10

"in bulk 15

Tufting buttons, 22 line, in doz-

ens only 60

Zino glaziers' points 5

Double pointed tacks, papers 90 and 10

"bulk 40

Clinch and duck rivets 45

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English, ass skin per doz. 2 75 5 00

English, Patent Leather 5 50 9 75

Chesterman's each 0 90 2 85

"steel each 0 80 8 00

TINNERS' SNIPS.

Per doz. 3 00 15 00

Clausen, discount 35 per cent.

THERMOMETERS.

Tin case and dairy, 75 to 75 and 10 per cent.

TRAPS (steel).

Game, Newhouse, discount 25 per cent.

Game, H. & N. P. S. & W., 65 per cent.

Game, steel, 72½, 75 per cent.

TROWELS.

Diaston's, discount 10 per cent.

German per doz. 4 75 6 00

S. & D., discount 35 per cent.

TWINES.

Bag, Russian per lb. 0 27

Wrapping, cotton, 3-ply 0 24

"4-ply 0 27

Mattress per lb. 0 33 0 45

Staging 0 27 0 35

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Brooks' 0 12½

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"No. 2 5 50

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discount 50 per cent.

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10 per cent.

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Premier steel ware, 40 per cent.

"Star" decorated steel and decorated whit

25 per cent.

WIRE.

Smooth Steel Wire.

No. 0-9 gauge. \$2 25

10 " 6c. extra.

11 " 12c. "

12 " 20c. "

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Extra net per 100 lb.—Oiled wire 10c.

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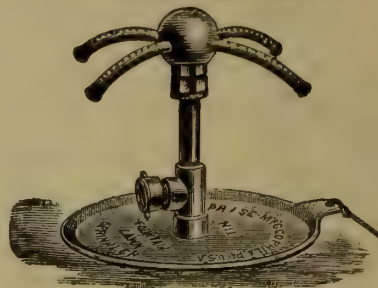
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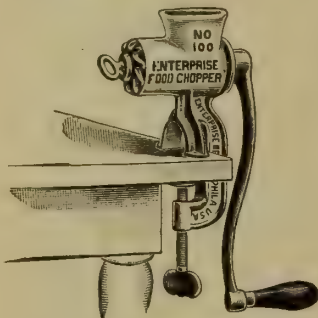
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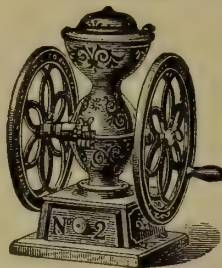
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North Bros. Mfg. Co., Philadelphia, Pa.
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Smith & Hemenway Co., New York.
Silica Battery Stone Co., Ingersoll, Ont.
Stanley Rule & Level Co., New Britain, Conn.
Taylor-Forbes Co., Guelph, Ont.
Waggoner Ladder Co., London, Ont.
Wilcox Mfg. Co., London, Ont.

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Covert Mfg. Co., West Troy, N.Y.
Loughheed, J. S., & Co., Sarnia, Ont.

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Oneida Community Co., Niagara Falls.

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Maxwell, David, & Sons, St. Marys.

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Dorke Bros. & Co., Montreal.
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Silberstein, A. L., New York.
Smith & Hemenway Co., New York.
Walter, E. F., & Co., Montreal.
Wiesbusch & Hilger, New York.

Educational.

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Metropolitan Business College, Ottawa.
St. Margaret's College, Toronto.

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Canadian Aluminum Works, Montreal.
Falk, Stadelmann & Co., London, E.C.
Morrison James, Mfg. Co., Toronto.
Munderloh & Co., Montreal.
Sayer Electric Co., Montreal.

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Legg Bros., Toronto.

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Millen, John & Son, Montreal.

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Ontario Wind Engine and Pump Co., Toronto.
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Mantels.

Batty Store and Hardware Co., Toronto.

Manufacturers' Agents.

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Metals.

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Canada Iron Furnace Co., Midland, Ont.
Canada Metal Co., Toronto.
Deseronto Iron Co., Deseronto, Ont.
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Gilbertson, W., Pontardawe, Wales.
Hankin, F., Montreal.
Ironside, Son & Co., London, Eng.
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Kemp Mfg. Co., Toronto.
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Thompson, B. & S. H. & Co., Montreal.

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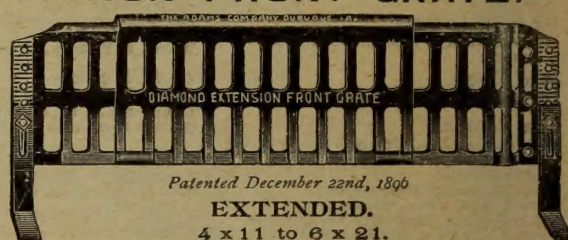
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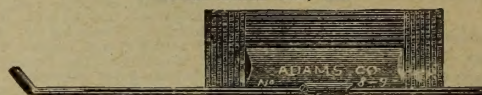
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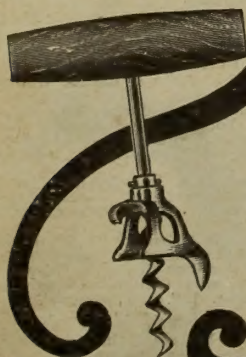
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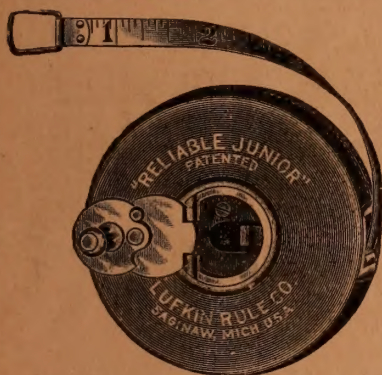


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